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THE DEMOGRAPHIC PROFILE OF FINNISH SOCIALLY RESPONSIBLE MUTUAL FUND INVESTORS

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ABSTRACT
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OBJECTIVES OF THE STUDY

The objective of this study is to examine who the investors investing in socially responsible mutual funds are and whether these investors differ from other investors. A couple of studies have examined the characters of ethical investors in other countries, but the field is totally unstudied in Finland. Thus, this study aims to shed light on the demographic profile of Finnish investors who invest in socially responsible investment (SRI) funds.

To compare the profile of an ethical investor to that of a conventional investor, the demographics of investors investing in certain SRI funds and, on the other hand, in the reference (or conventional) funds are tracked and the differences between these two groups are analysed. Moreover, because of the special features of the SRI funds, the study overviews the strategies of ethical investing, its history and current market trends. The study includes also an overview of previous studies on SRI financial performance and investor characteristics.

METHODOLOGY OF THE STUDY

Because the findings of previous studies indicate that differences between ethical and non-ethical investors exist, the hypothesis states that investors investing in SRI funds differ from conventional mutual fund investors in their demographics. The data consists of the domestic private investors of two SRI funds – a bond and an equity fund – at 30th September 2004. The gender, age, residence and invested amount of these investors are studied and compared with the corresponding data of investors of three conventional funds. The hypothesis states that the socially responsible investors are younger and more urbanized than their conventional counterparts. They are also expected to be more likely female and have invested smaller amount to the ethical fund than the traditional investor to the non-ethical fund.

To begin with, the analysis is conducted to ethical and reference investors as a whole. Second, the profile of investors is studied in two sub-groups: bond and equity investors. The statistical significance of the findings is evaluated with χ^2 – test and *t*-tests, depending on the type of the variable in question.

RESULTS OF THE STUDY

The results of the study are in line with the previous studies. In total, the investors investing in socially responsible mutual funds turned out to be younger and more urbanized than their conventional counterparts. In addition, the ethical investors are more likely to be females and to have invested smaller amount to the SRI fund than the reference investor to the conventional fund. All the differences were also statistically significant.

Even if the main results are in the line with the previous studies, there is some divergence in the sub-group results. In the bond investor group the gender hypothesis did not find support. In addition, in the equity fund group only gender and invested amount hypotheses were accepted.

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SUOMALAISEN EETTISEN RAHASTOSIJOITTAJAN DEMOGRAAFINEN PROFIILI

TUTKIMUKSEN TAVOITE

Tutkielman tavoitteena on selvittää, keitä eettisiin (ts. yhteiskuntavastuullisiin) sjoitusrahastoihin sijoittavat henkilöt ovat ja miten he mahdollisesti eroavat muista sijoittajista. Muutamat tutkimukset ovat käsitelleet eettisten sijoittajien ominaispiirteitä muissa maissa, mutta suomalaisia vastineita ei aihealueelta vielä löydy. Siksi tämä tutkielma pyrkii valottamaan suomalaisen eettisen rahastosijoittajan ominaisuuksia.

Vertaillakseen yhtesikuntavastuullisen ja perinteisen sijoittajan välisiä eroja, tutkimus pyrkii selvittämään tiettyihin eettisiin ja perinteisiin rahastoihin sijoittaneiden henkilöiden ominaispiirteet ja analysoimaan eroja näiden kahden ryhmän välillä. Empirian lisäksi tutkimusksen tavoitteena on antaa yleiskatsaus eettisen sijoittamisen ideologiaan, strategioihin, historiaan ja nykyiseen markkinatilanteeseen. Myös aikaisempia yhteiskuntavastuullisen sijoittamisen tuottovertailu- ja sijoittajaprofiilitutkimuksia esitellään lyhyesti.

TUTKIMUKSEN METODOLOGIA

Koska aikaisemmat tutkimukset ovat antaneet viitteitä siitä, että yhteiskuntavastuullisten ja perinteisten sijoittajien välillä on eroja, tutkielman hypoteesit perustuvat tähän olettamukseen. Tutkimuksen aineisto käsittää yhden eettisen korko- ja yhden osakerahaston kotimaiset yksityiset sijoittajat 30. syyskuuta 2004. Näiden sijoittajien sukupuoli-, ikä-, asuinpaikka- ja omistusjakaumat analysoidaan ja jakaumia verrataan kolmesta perinteisestä sijoitusrahastosta saatuun vastaavaan aineistoon. Yhteiskuntavastuullisen sijoittajien oletetaan olevan nuorempia ja kaupunkilaistuneempia kuin perinteisten sijoittajien. Heidän myös uskotaan olevan suuremmalla todennäköisyydellä naispuolisia ja sijoittaneen vähemmän eettiseen rahastoon kuin perinteinen sijoittaja omaan rahastoonsa.

Päätutkimuksessa analysoidaan yhteiskuntavastuullisia ja perinteisiä sijoittajia kahtena homogeenisena ryhmänä. Tämän jälkeen tutkimuksessa on analysoitu vastaavia eroja osekerahastosijoittajien ja korkorahastosijoittajien alaryhmissä. Tulosten tilastollinen merkitsevyys tarkistetaan χ^2 – tai *t*- testillä , riippuen kyseessä olevan muuttujan ominaisuuksista.

TUTKIMUKSEN TULOKSET

Tutkielman tulokset ovat linjassa edeltävien tutkimusten kanssa. Päätutkimuksessa eettiset sijoittajat havaittiin nuoremmiksi ja kaupunkilaistuneemmiksi kuin perinteiset sijoittajat. Lisäksi eettisten sijoittajien huomattiin olevan suuremmalla todennäköisyydellä naispuolisia ja sijoittaneen vähemmän eettiseen rahastoon kuin perinteiset sijoittajat omaan rahastoonsa. Kaikki yllämaininut tulokset olivat myös tilastollisesti merkitseviä.

Alaryhmien tuloksissa syntyi kuitenkin hajontaa: Korkorahastosijoittajien ryhmässä sukupuolihypoteesi jouduttiin hylkäämään. Osakerahastosijoittajien ryhmässä vain sukupuolta ja sijoitettua summaa koskeneet hypoteesit saivat tukea, muut kaksi hypoteesia jouduttiin hylkäämään.

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1 INTRODUCTION

1.1 Background

Corporate social responsibility was not discussed in annual meetings 20 years ago, but it is now routinely discussed both there and on the web sites of big companies. We can often read about companies' commitment to communities, diversity and the environment. Consulting firms have sprung up to advice on building a reputation and recognition as a responsible company.

The question if business activity should be valuated with ethical principles at all would probably have raised negative responses fifty years ago and still it polarizes the financial world into supporters and opponents. One of the first and most active objectors of the ethical evaluation of business is Nobel winner Milton Friedman:

> *"There is one and only one social responsibility of business – to use its resources and engage in activities designed to increase its profits so long as it stays within the rules of the game... Few trends could so thoroughly undermine the very foundations of our free society as the acceptance by corporate officials of a social responsibility other than to make as much money for their stockholders as possible." (Friedman, 1962, p.133.)*

Even if the pure profit maximization is still the heart of the financial theory, opinions supporting ethical valuation of business have raised their heads already for decades. At the same time as Friedman saw the only goal to be profit maximization a growing number of economists regarded that management cannot effectively discharge its long-run responsibilities to shareholders unless it also behaves responsibly towards employees, customers, government and the public at large. They stated that ability of the corporation to protect and enhance the stockholders' wealth depended crucially on the goodwill and confidence of a larger community. For example, George Steiner, a Professor of University of California concluded in 1972 that "it is the duty of business today to anticipate potentially serious impacts of its action on individuals and prevent undesirable results".

The impact of this socially responsible interest of the management is, however, quite limited: companies do not own themselves but are possessed by their stockholders. As long as these stockholders put profit maximization in front of all other considerations, so will corporations. Thus, socially responsible or ethical investing can be seen as an attempt to move companies toward more socially responsible objectives. The majority of the literature of socially responsible investing states that the fundamental belief that socially responsible investors – briefly SRIs - share is that the way we invest our money matters. Today, a growing number of individuals and institutions have recognised this principle. Because of this, the field of socially responsible investing has becoming more and more popular among investors (Domini, 2001. p. 4). This fact is supported also by David W. Moore, who reports in his gallup survey that about one of four Americans living in households with money invested in the stock market have heard of "socially responsible" investing, and 27% of these claim to have money in such investments (Moore, 2000). According to Social Investment Forum (SIF) also assets involved in social investing have grown 40 percent faster from 1995 to 2003 than professionally managed investment assets in the U.S. on average (Social Investment Forum, 2003).

1.2 Research Questions and purpose of the Study

Even though the era of socially responsible investing in Finland is quite short, it has been studied quite extensively. Many researchers and students have charted and examined the investment alternatives in the field of Finnish socially responsible mutual funds (for example Karhapää (2001) and Rautio (1999)). Also studies about the financial performance of ethical mutual funds have been made (Tuokkola (2004)).

However, there are no studies made about the characteristics of the investors investing in socially responsible investment alternatives in Finland. Thus, the questions about the gender, age, residence and socio-economical status of these investors remain totally unanswered.

The objective of this study is to examine who the investors investing in socially responsible mutual funds are and whether these investors differ from other investors. To do this, I track the demographics of investors investing in certain socially responsible mutual funds and, on the other hand, investors investing in the reference (or conventional) mutual fund and

analyse the differences between these two investor groups. Moreover, because of the special features of the social funds, I introduce the theory behind ethical investing and discuss why and how these funds possibly differ from other mutual funds in their market performance.

1.3 Structure of the Study

The study is structured as follows: Chapter 1 gives an introduction to the topic and introduces briefly the research question. Chapter 2 outlines the theory, history and investment strategies of socially responsible investing. The current markets for mutual funds and especially for SRI funds are discussed in chapter 3. Chapter 4 gives a review to the existing studies on SRI fund performance and investor profile. Finally, chapters 5 and 6 represent the empirical part of the study. Chapter 5 introduces the hypotheses, data and methodology and chapter 6 carries out the study. Chapter 7 concludes.

2 SOCIALLY RESPONSIBLE INVESTING

This chapter introduces the facts related to social responsible investing. Chapter 2.1. introduces the definitions and the general idea behind the socially responsible investing. Chapter 2.2. looks into the global history and the development of SRI and introduces the major geo-political factors behind this development. Chapter 2.3. reviews the basic strategies of ethical investing: negative, positive and quality screens, community investing and active owner strategies (shareholder advocacy/activism). The last two are perhaps not so familiar among Finnish investors and therefore they are studied more profoundly. Moreover, because in Finland the implementation of those strategies is quite rare, US examples are given.

2.1 General Idea

The general idea of *socially responsible investing (SRI)* is to combine ethical criteria to investing activity. These criteria are not meant to affect the productivity of the investment portfolio – on the contrary they are aimed to find companies that may bring profit even more

than on average in the long run. The idea behind this thought is the belief that markets are too short sighted and thus focus merely to the short run performance of the companies. Companies with healthy business idea, good ethical status and social responsibility are thus believed to be able to beat the market in the long run. In the light of the financial theory beating the market with extra constrains is of course not possible. Thus, a more appropriate goal might be stated as an optimization problem: investors want to maximize the financial returns within SRI constrains.

The terms '*socially responsible investing*, *ethical investing* and *green investing* are used somewhat mixed in the literature. Some researchers make a difference between ethical and socially responsible actions while others treat them as synonyms. There is, however, a clear trend to use the phrase 'socially responsible' instead of 'ethical' as the standard descriptive term when describing the investment activity and term 'ethics' when discussing about individual, personal values. The term green investing is closely linked to socially responsible investing but not as synonymous. Tessa Tennant (1991) sees green investing as well as ethical investing as a sub-concept: "... Socially responsible investment should take into account both ethical and environmental issues." In this report 'socially responsible investing' and 'ethical investing' are concerned to be the same and 'green or environmental investing' is seen part of the former.

The definitions of socially responsible investing or ethical investing in the literature are substantial. Perhaps the best definition in the light of the financial theory and specially efficient market theory is the definition of Russell Sparkes (Sparkes 2002, p. 26-27):

> *" The key distinguishing feature of socially responsible investment lies in the construction of equity portfolios whose investment objectives combine social, environmental and financial goals. When practised by institutional investors this means attempting to obtain a return on invested capital approaching that of the overall stock market."*

Another fair and inclusive definition is stated by Crish Cowton (Cowton, 1994):

> *"Ethical investment may be defined as the exercise of ethical and social criteria in the selection and management of investment portfolios, generally consisting of company shares. This contrasts with standard depictions of investment decisions, which concentrate solely on financial return...Ethical investors don't care only about the size of their prospective financial return and the risk attached to it, but also its source – the nature of the company's goods and services, the location of its business or the manner in which it conducts its affairs ."*

Even if in the definition of 21st century the financial goal is crucially combined with the social ones and thus SRI differs clearly from charity and donation, the traditional financial view of a *rational investor* does not apply. According to Hagin (1979, p.153), there should exist merely two different criteria that all the investors consider essential when deciding between different securities: the risk of and the return on the investment. The rational investor should prefer the highest rate of return for a given level of risk and the lowest possible level of risk for a given rate of return. Thus, combining ethical criteria to investment decision clearly contradicts the financial theory of investor rationality.

What about the motives behind ethical investing? The literature of socially responsible investing state that ethical investors share the fundamental belief that the way we invest our money matters. The vast majority of the literature also shares the view that the goal of the socially responsible investors is purely to build a future with environmental sustainability and human dignity and to positively impact on the future of our planet. Noreen (1988) sees ethical behaviour as being behaviour between economic agents, through which certain qualities such as truthfulness and voluntary compliance are expressed. This is in contradiction with the fundamental premise of agency theory (see, for example Jensen and Meckling, 1976) that people act unreservedly in their own narrowly defined self-interest, even with guile and detect if necessary. However, Noreen makes distinction between *altruistic* and *utilitarian* ethical behaviour. Altruistic behaviour, he says, stems from a concern for the welfare of others and thus represents pure unselfish actions. On the other hand, utilitarian ethical behaviour involves voluntary compliance with rules that concern the

individual's self-interest. In terms of Noreen's two-way classification, SRI is ethical behaviour of the utilitarian type: investors invest ethically to gain utility from at least some minimum financial return, and, according to Tippet and Leung (2001, p.46), also to experience utility from having 'done the right thing'.

Michelson et al. (2004) introduce a concept comparable to the utility of Noreen. They express socially responsible investment as 'feel good' –investment that produce psychic income in addition to the financial one. Rosen et al. (1991) take the concept even further: they distinguish two schools of thoughts about who the SRIs might be. The first school states that socially responsible investment is one of the socially beneficial activities the ethical investor engages in, including recycling, energy conservation etc. Thus, this school sees the ethical investment as an extension of an individual's lifestyle. The second school characterizes the ethical investor as a "guilty yuppie" i.e. socially responsible investment is seen as an activity meant to compensate a "me-oriented" way of life rather than one element of an all-encompassing lifestyle. However, their study results suggest that ethical investment is more likely to be an extension of the investor's way of life, not an activity meant to refund for an otherwise hedonistic lifestyle.

2.2 A Global History

"Like it or not, the days when portfolio decisions could be made in a complete moral and social vacuum are numbered."

In this way Financial Times Editorial describes the atmosphere in 1990 (Financial Times, 14th April 1990, p.6). The roots of socially responsible investing can, however, be dated a far more back.

2.2.1 The Starting Point

In early times there were, of course, no investing activity as we today see it, but there are examples of using an economic structure to create a well –being for all within designated communities. For example, in 262 BC the contemporary ruler of India renounced war and undertook extensive public works projects to fulfil the needs of all his subjects (Domini,

2001, p. 28). Also already in the early biblical times the Jewish Law laid down many directions about how to invest ethically (Schueth, 2003, p. 189).

The first named pioneers in the ethical investing are Methodist John Wesley (1703-1791) in the Europe and Quakers (Society of Friends) in the new world approximately at the same time (Sparkes 2002, p. 46, Kinder *et al*, 2003). In 1758 at Philadelphia the formal minutes of early meetings of Quakers urged to free slaves and prohibited those who had bought or sold slaves from engaging in the affairs of the society (Domini, 2001, p. 29).

The Quakers also have a history of avoiding profits from the sale of armaments. The avoidance of armament and other war-related activities can be seen as a common goal for all of these pioneers: Also John Wesley admonishes in his sermon "The use of money" his flock to avoid making money or profiting "by hurting our neighbour" (Domini, 2001, p. 29).

However, with the exception of some conscious individuals and communities described above as a whole the humankind believed still at the beginning of the 20th century its ability to exploit its surroundings and environment totally without responsibility. Any human, social or environmental factors were not set in front of the economic performance and growth and the ethical way to invest money was an interest of limited and typically religious groups (Brill, Brill & Feigenbaum, 1999, 31-33). Even so late as in the beginning of 20th century the religious roots of SRI can be seen: in the early 1900's the ethical investor were mainly Christians. The strategy was still to avoid certain industries and companies –so called "sin" stocks (Brill & Reder, 1993, p. 29). The screened issues were mainly "sin" industries such as alcohol, tobacco, pornography and gambling.

2.2.2 The Break Through: the 1960s and 1970s

The modern, widespread roots of social investing can be traced to the impassioned political climate of the 1960s. The older faith-based avoidance model began to evolve and new ways to implement social criteria stepped in: avoidance begun to be companied with positive selection tactics and active participation aiming to influence companies' actions. During that decade a series of themes from civil rights to concern about the cold war and equality for

women and underprivileged brought the theme in the awareness of masses (Schueth, 2003 p. 190).

Some signs of the civil rights movement can be seen already in the mid 1950s: efforts were made to push corporations into negotiations, but most of these took the form of boycotts and letter-writing campaigns (Morano, 1984, p.12). One example of shareholder activism and successful civil rights campaign happened in Rochester, New York in 1965. The Kodak Company became the target for Rochester's black community aiming to improve living conditions and job opportunities for black people. Recognizing the dominance of Kodak in the local economy, the black coalition demanded the company to hire six hundred unemployed people. After intensive negotiations and a shareholder resolution voting[1] the agreement between the two parties was made and thus a precedent for similar cases was set (Kinder et al, 1993, p. 17).

The 1960s and 1970s were also a period of war. The United States was involved in a highly controversial war against Vietnam and feelings of civilians ran very strong. Thus the period was very strongly marked by the resistance of war industry and after USA's napalm bombs to Vietnamese villages in 1972 the rage was also targeted against chemical industry and more specifically against Dow Chemical who had manufactured the napalm used in the bombs. (Domini, 2001, p.33). The concerns about the Vietnam War also led to the establishment of the first 'modern' SRI mutual fund in autumn 1971, the Pax World Fund. The key idea behind the fund was to promote peace and avoid to invest in companies that profit from war (Sparkes, 2002, p.49-50). The Pax World Fund is still going strong and is one of the biggest SRI funds in the US.

2.2.3 Steady growth of the 80s: South Africa and Apartheid

From 1960s onwards the ranks of socially concerned investors have risen strongly. One of the biggest contributors in the 1970s and 1980s was the racism: millions of people, churches, universities, cities and states focused their watchful eye on pressuring the white minority

[1] The shareholder resolution process is a formal communication channel between shareholders, management and the board of directors. Resolutions can request information from management or ask the company to consider changes in practices or policies. If not successfully challenged by SEC resolutions appear to the company's proxy ballot and are voted. In order to be officially voted upon, resolutions must be formally presented at the annual meeting (Social Investment Forum, p. 15).

government of South Africa to dismantle the racist system of apartheid (Schueth, 2003). The active measures taken by the social investors culminated in the General Motors (GM) case. The company was not only the largest employer in the United States but also the largest American employer in the South Africa, which made it an excellent target of campaigns against racism (Domini p. 34-37, Sparkes, p. 52-58). The public campaigns against GM and shareholder activism obligated the company to elect a new board member, the Reverend Leon Sullivan, a veteran civil rights activist and close associate of Martin Luther King in 1977. He created a code of conduct for doing business in South Africa that became known as the Sullivan Principles. The principles included among others the non-segregation of all races, fair employment practices and the demand for equal pay for equal work and a growth of the amount of supervisory positions granted for non-white people.

In the 1980's the campaign against South Africa escalated. Cities and states began refusing to purchase goods and services from corporations doing business in South Africa. Also many colleges, universities, faith-based groups and pension plans divested themselves in the stocks of corporations that were involved in the apartheid. In addition the USA, European Economic Community (EEC) and the British Commonwealth all banned new investments in South Africa in 1986. (Domini, 2001, p. 35)

Still, the process was slow. By 1990, only 4 percent of managers where black at firms that had adopted the Sullivan Principles, even though black people represented 60 percent of total employees (Van Heerdan, 1990, p. 199). The death throes of apartheid began in 1990, when Nelson Mandela was released from 28 years of captivity and the state of emergency was lifted. Conceivably the biggest victory of antiapartheid movement saw daylight in 1994, when South African citizens of every ethnic background were able to vote for the first time in nearly 50 years. Soon after the western world started to discharge boycotts when the newly elected black president Nelson Mandela urged cessation of sanctions and reinvestment (Sprakes, p. 57, Domini, p. 35-37).

The late 1960s and 1970s were also the formative years for the modern structure of community development financial institutions. Community initiatives were springing up, largely in response to increased awareness of racial inequity and lack of civil rights. In 1973 America's first bank dedicated solely to community development - South Shore Bank (now

ShoreBank) was founded (South Bank's web-site, www.sbk.com). The bank was founded largely as a social experiment to see if the lending to the neighbourhood could stabilize it. The experiment worked: the loans to poor people did build their wealth and helped build a healthier community – and to the surprise of many, the loans were even repaid in a higher rate than national averages. This community founding model has inspired to create similar institutions in the United States, Europe and in developing nations with emerging economies including Pakistan, Kenya and Bangladesh (Domini, p. 41).

2.2.4 Mid-80s: Environmental concerns raise their heads

In the period starting from the 1980s people where not perceptibly active politically or socially. Church attendance fell steadily and memberships of political parties dropped away. However, the public environmental concerns grew as a result of a number of environmental disasters. Bhopal, Chernobyl and Exxon Valdez incidents, along with increasing information about ozone depletion and global warming have brought the seriousness of environmental issues to the forefront of social investors' minds.

The Bhopal accident took place in 1984 in Bhopal in India. The gas pipe leaked in an chemistry plant causing the whole building to explode and resulting in the death of 3500 people and injuring over 50 000 (Sparkes, p.58-63). While Soviet Union and Europe confronted their biggest environmental disaster in 1986 in the form in Chernobyl's nuclear plant explosion, the most high-profile environmental catastrophe in America was probably the Exxon Valdez. The accident took place on March 1989 on the coast of Alaska, where the oil supertanker Exxon Valdez ran aground. About 11 million gallons of oil were spilled, over 3,000km of coastline was polluted by the spill, which killed some 300,000 sea birds and directly affected the livelihoods of 30,000 people in the fishery and shellfish sectors (Cripps, 2003). The cause of the spill as determined by the National Transportation Safety Board (NTSB) was "the failure of the third mate to maneuver the ship due to fatigue; the failure of the master to provide proper navigation because of excessive alcohol and the failure of Exxon Corporation to provide a sufficient crew for the Exxon Valdez." (NTSB, 1990).

The cost of the cleanup of the spilled oil during 1989 was about $1.85 billion. Exxon was fined millions of dollars as a result of their negligence. First they were fined $150 million,

the largest fine ever for an environmental fine. Exxon next agreed to a $100 million dollar fine for wildlife damage. Finally in the civil settlement they agreed to pay $900 million dollars over a 10-year period to the State of Alaska and the United States (Shirey, 1999). Moreover, the Exxon Valdez case is not yet over: on January 2004 the federal Court of Alaska sentenced Exxon Mobil to pay 6,75 billon dollars to citizens of the coast of Alaska, among others to thousands of fishermen and landowners, and the case still continues (Turun Sanomat, 2004).

The growth in the 'green thinking' can be seen also in the data from UK. Sparkes (2002) notes that during the four-years period 1988-92 there were 10 environmental fund launches in the mutual fund business of UK. Also the membership base of environmental organizations grew steadily, as the Table 2-1 shows.

Table 2-1: Growth of environmentalism: memberships numbers (thousands) in UK 1971-1993:

	1971	1981	1993
National Trust	278	1046	2189
RSPB (UK environmental organization)	98	441	850
Greenpeace	0	30	410
Friends for the Earth	1	20	150
WWF (UK)	12	60	207

Source: Sparkes, p. 62

2.2.5 1990s and 2000- : Corporate Social Responsibility

During the last couple of decades there hasn't emerged as large scale and common goals as the apartheid was in the 1980s. The environmental thinking is still going strong and environmental screens are one of the most employed investigation methods by the mutual funds. Also the terms globalization and corporate social responsibility are raising strongly their heads. Companies are demanded to take into account all its stakeholders, among others consumers, suppliers and employees, and campaigns against child labour and sweatshops are a common sight. Moreover, pension funds are evolving to take the dominant role in the SRI business: the money under their management is growing strongly when the masses are earning their pensions and reaching the retirement age.

Table 2-2 summarises the major geopolitical factors that have affected the development of SRI:

Table 2-2: Geopolitical factors and SRI:

Event	Consequense	Date
Vietnam War	Birth of modern SRI	1969
Consumer Activism	Activation of shareholders	1970
South Africa	SRI activism against racism	1980s
Chernobyl, Exxon Valdez	Growth in green funds and environmental awareness	1980-
Ethical Consumerism/ Fair trade	Rapid growth in retail SRI funds	1990-
Globalization, Corporate social responsibility	Activation of pension funds	2000-

Source: Sparkes 2002, p. 66.

2.3 Strategies in implementing SRI

Socially responsible investing can be seen as a specific form of one of the common investment strategies, *value investing.* The basic value investing concerns buying securities when their price is low relative to some fundamental benchmarks (Bartov and Kim, 2004). While in the general form of value investing the benchmarks are such as dividends, earnings (P/E –figure), cash from operations or accounting book value, in SRI the benchmarking is done through social *screen analyses.* The premise underlying in the value investing approach is that while the true value of securities is expected to be estimable and relatively stable, their market prices fluctuate excessively due to over optimism and pessimism and short term speculation. Thus, the value investing strategy is expected to outperform the markets in the long run.

The basic strategies of SRI are the screening analyses (negative, positive and best in class – screens), community investing and active owner -strategy. To be able to identify a socially responsible investment portfolio, socially responsible investors translate their ethical and moral concerns into *screen analyses*. Screening is the process of selecting companies in the basis of their social and/or environmental performance. A social screen alone may exclude or include a certain company in a portfolio. However, passing a social screen should never be the sole ground for investing: an investment must make a financial sense. Thus social

screens must be always accompanied with financial ones when making an investment decision.

2.3.1 Negative Criteria

A negative social criteria or *exclusionary social screen* is an ethical criteria that, if not satisfied, eliminates companies from consideration for an investment alternative (Kinder et al., p. 56). Portfolio investors who apply negative social criteria do so, first, to make their own portfolios more consistent with their beliefs and, second, to show others the social costs of the issuer's actions or products.

Exclusionary screens are the basic model of socially responsible investment that has been used by SRI mutual funds and unit trusts ever since. To employ a negative screen the investor or a found manager defines activities, industries or company policies that they find doubtful or dubious. Traditionally these include war-industry, tobacco, gambling, alcohol, pornography and policies which harm the environment or break human rights.

An absolute exclusion screen rules an investment alternative out always if it has something to do with the unallowed activity or industry. A more moderate criteria is employed when using *filter screens* (Sparkes p. 28). Filter screens define a maximum amount that the company can possess in the forbidden industry. Typically it is a maximum percentage of a company's turnover, for example 10% or 20%[2].

2.3.2 Positive Criteria

Social investing begun with negative selection criteria and it will probably always use them. The development, however, has lead to a greater emphasising of positive and quality screens: Critics of negative screening state that strategies that merely exclude companies from investment portfolio have no net impact, because there is always someone out there who is willing to buy the abandoned shares instead (SRI World Group Inc (1)). They say that screening offensive companies may make the investor feel better about where they are

[2] For example: if more than 20% of company's revenue comes from war industry it is automatically excluded from the possible investment alternatives.

putting their money, but they are not helping encourage social change and environmental improvement.

Thus, negative screens allow investors to avoid harmful industries, but they do not enable weighting industries or companies that attempt to enhance their positive impact on social or environmental issues. In contrast, positive screens both reward companies that have cleaned up their activities and encourage other companies to follow the footsteps.

The implementation of positive screens is the controversy to the implementation of negative screens. Thus, if a company succeeds in the desired action well enough, it will be included in the investment portfolio. The analysis is accomplished by looking at the manners in which the company treats its shareholders, customers, employees, suppliers, community and the environment (Domini, 2001. p. 21). Unlike negative screens, which are generally more black and white, positive screens require an analysis of complex issues such as pollution, workplace practices, diversity, and product safety. The problem with this analysis is that there is relatively little agreement on what such positive issues in more detail are (Sparkes, p. 28). Moreover, the easily available data is scarce and the analysis of the data usually calls for subjective judgments.

2.3.3 Quality Screening (Best in Class)

One of the difficulties with the classic avoidance approach is that it reduces diversification and potential growth opportunities. While private investors investing in retail funds may be willing to accept this, it is harder for pension funds which have strict yield goals (Sparkes, p. 28). The answer to this problem lies in the later developed and more sophisticated SRI strategies – quality screening and shareholder activism.

Quality screening permits investment in companies with a better record than their peers have (Domini, p. 20). Investors may accept companies in all the sectors of the market, but they try to identify the 'best in class' companies. They may choose to include a company that has demonstrated leadership in their industry as the best representative, despite the overall record of that particular industry.

The advantage of this best-in-class investment style is that it does not need to negatively affect the risk-return performance of the investment, even though the portfolio can be classified as socially responsible. Actually, the Innovest[3] data on environmental performance suggest that quality screening can improve the financial returns (Sparkes, p. 28). In addition to enhanced returns, rewarding industry leaders or companies that have made significant progress with carefully placed investments can encourage other companies in their industry to improve their social performance (SRI World Group Inc (1)).

2.3.4 Social Criteria/Community Investing

Community investing is perhaps the least well-known sector of socially responsible investing. It may be a valuable way to diversify a socially responsible portfolio and give dividends in the form of social returns such as affordable housing, health clinics, day-care facilities, jobs, and other vital signs of community renewal. Moreover, it may provide the seed capital for borrowers that otherwise would have no access to the capital. Especially in the US and also around the world, community investing enables local organizations to provide financial services to low-income individuals and to supply capital for small businesses and vital community services, such as child care, healthcare, public transportation and housing for poor and elders (Social Investment Forum, p. 23; Brill & Reder, p. 31).

Usually investors participating in community investing prefer to put their money in communities close to themselves. This phenomenon, known as *"home bias"*, is widely reported in the financial studies and also in Finnish stock markets. For example, Grinblatt and Keloharju (2001) found out that investors are more likely to hold, buy and sell the stocks of Finnish companies that communicate in the investor's mother tongue and that have chief executives of the same cultural background. Moreover, they discovered that investors in various municipalities in Finland prefer to hold and trade stocks headquartered close to the investor.

In Finland the biggest financial institution specified to community investing is Municipality Finance (Kuntarahoitus). It offers treasury bills and municipality bonds to both institutional and private investors both in Finland and internationally. The invested money is directed for

[3] A coalition of 120 international companies which seeks business-based solutions to global environmental problems (Sparkes, p. 287).

example to build schools, hospitals and housing. Except for Municipality Finance the financial institutions specialized to community financing are very scarce in Finland. On the contrary, in the US the markets for municipality securities and the structure of financial institutions are much more developed. To get a view how the community investing works in more developed markets, next paragraphs are devoted for the US market review.

Community development financing is most commonly organized in US through *Community development financial institutions (CDFIs)*. Domini (2001, p.108) states that there are three basic types CDFIs:

1. Community development banks (CDBs)
2. Community development loan funds (CDLFs)
3. Community development credit unions (CDCUs).

In addition, Social Investment Forum recognizes a fourth one: Community development venture capital funds (CDVCs) (Social Investment Forum, p. 24).

Community development banks and *community development credit unions* are the only CDFIs that are regulated and insured in the US (SRI World Group Inc (2)). They offer accounts and certificates of deposits[4] with market-rate (and also below-market-rate) returns, but instead of investing their depositors' money wherever they can get the greatest financial return, these banks and credit unions dedicate their funds to local disadvantaged communities. The biggest difference between community development banks and credit unions is that the former are for-profit institutions, while the latter are non-profits.

Like community development credit unions, *community development loan funds (CDLFs)* operate on a non-profit basis and thus provide funding and investment alternative at below-market-rates (Domini, p. 108). Loan funds also provide help with budgeting and building and other technical assistance to the borrowers to ensure the success of the project and the repayment of the loan (Domini, p. 108). Although they lend to at-risk population, these mechanisms protect the funds of investors in an effective way: these investments have been

[4] *Certificate of deposit* (CD) differs from a normal account in that sense that it ties the money up for a certain period (Brill & Reder, p. 143). The most common type of CDs, the time certificate of deposit, is for a fixed-term interest-bearing deposit in a large denomination. It consequently pays higher interest than a savings account, though the investor who withdraws money before its maturity date is subject to a penalty (Encyclopedia Britannica). Thus, CDs are comparable to the yield-accounts offered by Finnish banks.

even safer than the loans to large businesses, resulting in repayment rate as high as 99 percent in the past (Domini, p. 108; SRI World Group Inc (2)).

The fourth group of community development financial services are the *community development venture capital funds (CDVCs)*. They use the tools of venture capital to create jobs, entrepreneurial capacity and wealth in the economies of distressed communities. CDVCs make equity or equity-like investments to small businesses than may experience a rapid growth. Usually the investments to one company vary between $100,000 - $1,000,000 being somewhat smaller that normal venture capital investments on average (Social Investment Forum, p. 24).

Even though the community investing in Finland is in its infancy, in US also mutual funds are now exploring community investing as a way to diversify their own portfolios and improve their social impact (SRI World Group Inc (2)). These mutual funds are allocating a small portion of the funds to variety of community investments so that the overall impact on the total return of the fund is small.

2.3.5 (Active Owner Strategy): Shareholder activism / Shareholder advocacy

Active owner strategy stems from the agency theory, i.e . the managers of the firm may not act in the best interest of the shareholders (Bitler, et. al, 2005, p.541). Studies on the topic report that when monitoring of the managers' actions is costly and actions are partly unobservable, managers may exert less effort or invest in other nonvalue maximising activities, all to the detriment of shareholder value. In the financial theory the focus of the owner is purely the maximization of the financial value of the firm and thus this is also the goal the managers should aspire. The SRI approach differs from this in the sense that the social responsible investors monitor the social actions of the managers in addition to the financial ones.

As described above, shareholder activism is one of the strategies that may make the SRI funds more fascinating also to pension funds. Firstly, this strategy doesn't involve any exclusions based on social performance that might reduce diversification and thus increase risk or lower the expected return. Secondly, shareholder activism provides to pension funds

a channel to influence the companies in which their pension-savers work and encourage them to treat the future pensioners properly.

Shareholder activism means " the use of voting rights attached to ordinary shares to assert political, financial or other objectives" (Sparkes, p. 29). It takes place when a shareholder or a group of shareholders employ their power as the owners of the company to raise public awareness. The subjects of shareowner activism can include both domestic and international issues and may involve social, environmental, or corporate governance concerns. Common issues include working conditions and safety, discrimination, pay equity, board diversity, corporate governance and executive compensation. Overseas manufacturers have received particular attention in the area of labor and human rights, either in their own operations or that of their vendors, including the existence of "sweatshops" or the use of child labor (SRI World Group Inc (3)).

Shareholder activism can be classified into four types of actions representing different degrees of engagement with the offending corporation (SRI World Group Inc (3); Smith, 1996):

1. Dialogue with the company management ("engagement")
2. Voting for someone else's shareholder resolution
3. Filing a shareholder resolution
4. Confrontation / Divestment.

Some researchers leave the direct dialogue with the management, or *engagement* as some authors call it, outside the term shareholder activism. They feel that the pure shareholder activism rises from the use of the voting rights granted by the shares and is thus used in the annual meetings and other voting occasions. For example, in the publication of CSR Europe[5], engagement is presented as a separate strategy, not as part of shareholder activism (Sofres, 2003, p.7). However, here it is included as a part of the activism strategy.

[5] CSR Europe is a non-profit organization that promotes corporate social responsibility.

Also terms *activism* and *advocacy* are used somewhat mixed in the literature. While in the publication of Social Investment Forum terms advocacy and activism are used as synonyms, Sparkes makes a clear distinction between those two (Social Investment Forum, p. 15-22; Sparkes, p. 35-40). He claims that while socially responsible investors have financial return as one of their goals also when exercising shareholder activism, in advocacy campaigns the target is limited single issue goal. He states that in such campaigns maintaining the value of the shares is irrelevant, instead advocacy campaigns want bad publicity for the target company. Thus, to avoid confusions, I stick in this text in the term 'activism' when discussing about the issue.

While screening strategies aim to influence companies actions indirectly and the effect is likely to realize in the long run, direct dialogue with the management gives an opportunity to contribute directly to the manner in which the company conducts its business. When the direct dialogue is not enough to convince the directors of the company, the next step is to propose a shareowner resolution to be voted on an annual meeting. Although each company reacts differently to resolutions, in some cases even apparently marginal support by shareowners can apply enough pressure on a company to change its actions.

If dialogue, voting or resolutions don't have the desired effect, there are still two strategies to implement. Smith (1996) introduces the 'confrontation' tactics. In the terms of Sparkes (2002), this might fall in the category of an advocacy campaign. The purpose of 'confrontation' is to put the target company to shame and humiliate it especially in front of the consumers. If the socially responsible investor puts weight also to the financial return, it is wise to divest the investments to the target company before such actions. However, divestment at its own can also be a powerful strategy. Although divestment by an individual shareowner is unlikely to affect a corporation, many institutional investors, such as pension funds and mutual funds can carry a lot of weight through divestment (SRI World Group Inc (3)).

Even though shareholder activism in the US seems to be a flourishing form of SRI strategies, shareholder activism on social issues has been less successful outside the US (Sparkes, p.34). In Canada in has been illegal until the late 2001, while shareholder activists in the Europe and Asia confront such a practical difficulties that make the shareholder activism almost impossible. Sparkes states that only in the UK the shareholder activism has been tried

on a significant scale. However, the trends report of Social Investment Forum states notes that in the continental Europe Finland and Sweden share the atmosphere of most shareholder rights and ease to file resolutions (Social Investment Forum, p. 31). Thus, the frameworks to shareholder activism in Scandinavia exist.

2.3.6 The Prevalence of the Strategies

In the Table 2-3. the main strategies of shareholder activism are viewed. The first five are discussed in the text above. The sixth, industries of the future, refers to the strategy that emphasizes the industries with significant long-term growth prospects and potential to develop ecological and pro-environmental technologies (Sparkes, p. 29). The last one, SRI risk optimization, indicates a strategy that takes advantage of the basic portfolio optimization theory. The aim of the strategy is to use internal market correlations to minimize the risk of SRI exclusions. In other words, it enables to create portfolios that avoid certain sections or industries in the stock market, but produce an expected risk/reward performance similar to the benchmark. Hence, the strategy is very suitable for example to institutional investors such as pension funds who would prefer investing according to social criteria but cannot sacrifice the expected return ratio. However, non-professional private investors may face problems with this strategy because of its scientific nature that requires quantitative problem solving.

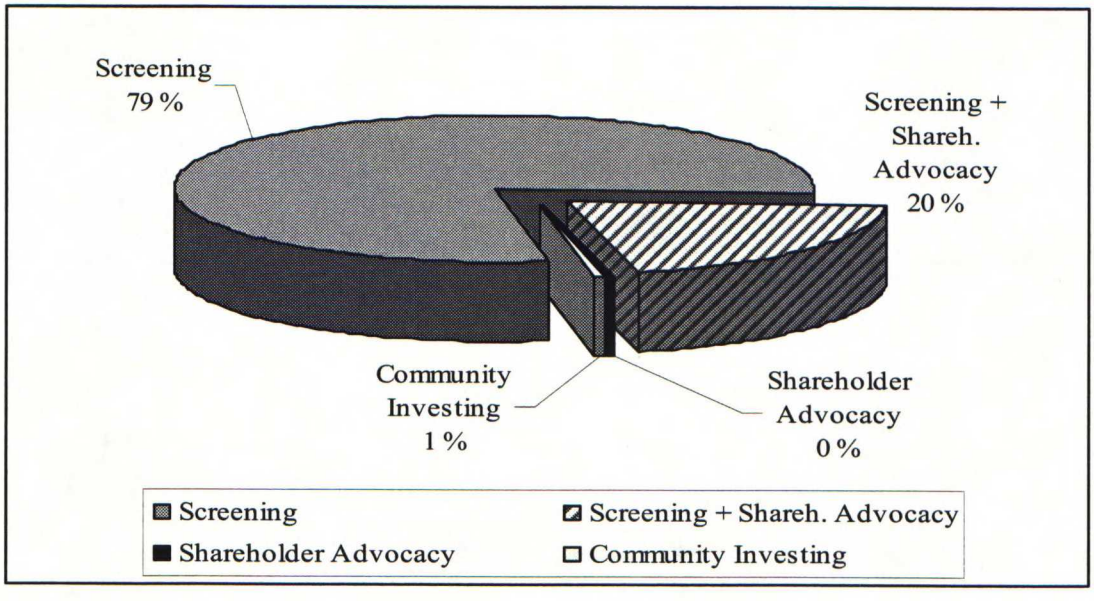
Table 2-3: Most common SRI strategies and problems related to them

Method	Risk/Problem
Exclusion Criterias	Lack of diversification
Positive Criterias	Lack of objectivity
Quality screening/Best in class	Limited data, lack of objectivity
Shareholder Activism/Engagement	Time consumption
Shareholder Advocacy/Confrontation	Must own 'problem' companies
Industries of the Future	Concentrated portfolios
SRI risk optimization	Scientific to implement

Although positive and negative screenings are easily distinguished, they are best considered as complementary tactics that can effectively be used to select socially responsible

companies. Also the rest of the strategies are usually used combined with each other. Social Investment Forum reports the usage of each of the SRI strategies in US annually. Their 2003 Trend Report indicates the following strategy frequencies (Social Investment Forum, 2003, p.1): according to the trend report, the most used strategy is screening: Figure 2-1 indicates that a majority (79%) of SRI funds rely only on screening – positive, negative or both.

Figure 2-1: The usage of different SRI strategies is US SRI mutual funds

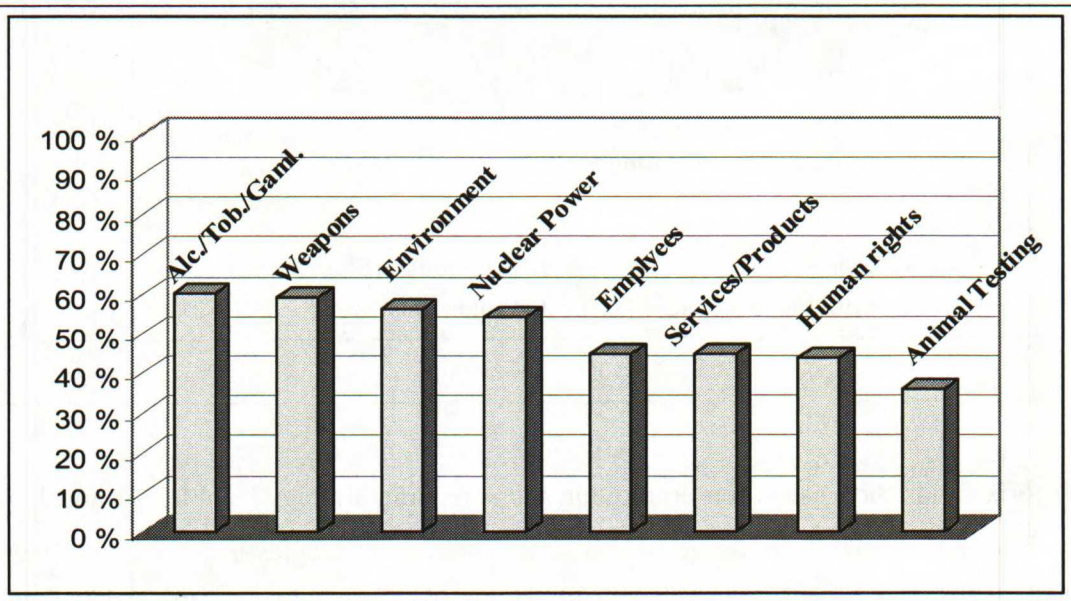


What criteria funds then use when employing the screening strategy? Table 2-4 and Figure 2-2 give information about the usage of different screening strategies in the US SRI mutual funds listed in socialfunds.com. Quite surprisingly, the old 'sin stock avoidance' is still the most common tactic: 60% of the funds avoid investing in companies that are involved with alcohol, tobacco or gambling industry. Also other negative screens are very common: over 50% of the funds avoid companies with business in weapons or nuclear power industry. From the positive screens the pro-environmentality and proper treatment of employees are the most common strategies. Table 2-4 shows also the usage of strategies in different mutual fund classes –in domestic, worldwide, balanced and fixed income funds. Figure 2-2 shows the summary of criteria used in all the funds in a graphical form.

Table 2-4: The usage of different screening criterions in the US SRI funds

	Domeistic (US) stock funds	Worldwide funds	Balanced funds	Fixed income funds	Summary/ All funds
Alcohol/tobacco/Gambling	63 %	56 %	60 %	50 %	**60 %**
Weapons	57 %	56 %	80 %	50 %	**59 %**
Environment	59 %	56 %	60 %	40 %	**56 %**
Nuclear Power	55 %	56 %	60 %	40 %	**54 %**
Emplyees	47 %	56 %	30 %	40 %	**45 %**
Services/Products	45 %	56 %	40 %	40 %	**45 %**
Human rights	45 %	56 %	30 %	40 %	**44 %**
Animal Testing	37 %	44 %	30 %	30 %	**36 %**
Number of observations	51	9	10	10	**80**

Figure 2-2: The usage of different screening criterions in the US SRI funds



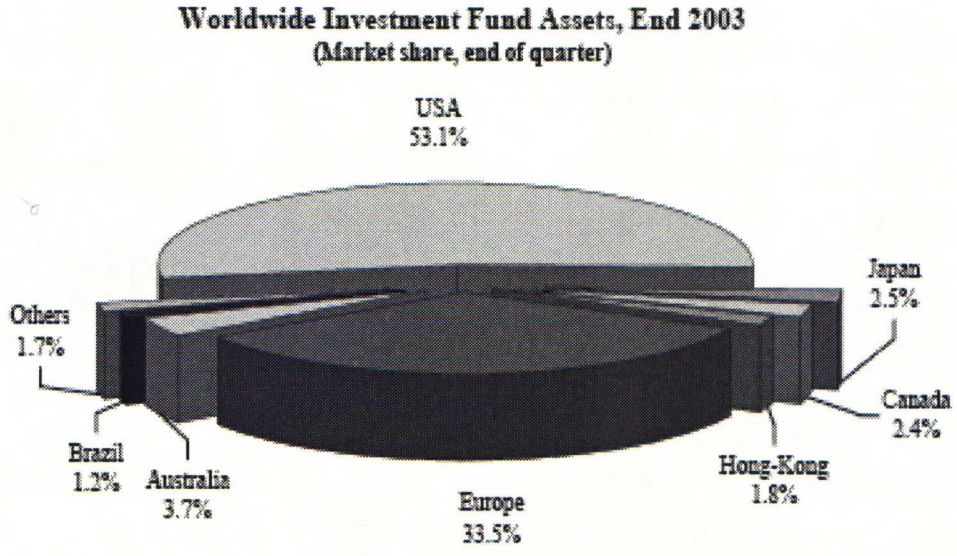
3 CURRENT MARKET SITUATION IN GLOBAL AND FINNISH SRI MARKETS

This chapter represents the current market situation of the US, European and Finnish SRI mutual fund markets. The presentation of the US market is followed first by the European and second by the Finnish market. To get the right picture of the magnitude of the SRI fund industry, each section includes a short overview of the general mutual fund market situation. Most of the statistical data is from the end of the year 2003, because the latest published world-wide SRI reports date back to that time.

3.1 Worldwide and US Markets

Looking at the worldwide distribution of investment fund assets, the United States and Europe hold the largest share in the world market and Australia, Japan, Canada, Hong-Kong and Brazil follow in this ranking[6]. The market shares of the leaders are 53.1 percent and 33.5 percent respectively, taking into account only the UCIT -assets[7]. Taking into account also the non-UCITS assets, the market share of Europe reached 39.3% and that of the U.S. 48.5%. Figure 3-1 represents the market shares.

Figure 3-1: Worldwide Investment Fund Market Shares (31st Dec, 2003)



Source: FEFSI

The investment fund assets have grown 23% since the end of 1990's. Investment fund assets worldwide were at €11.1 trillion[8] i.e. $14.1 trillion at the end of 2003. From the $14.1 trillion

[6] The source of all statistical data related to general mutual fund market situation in this chapter is from FEFSI International Statistical Release (2003:Q4).

[7] UCITs are publicly offered open-end funds investing in transferable securities and money market funds.

[8] Exchange rate EUR/USD = 1/1.265

$7,5 trillion, i.e. 53% were in the US investment funds. Assets of equity funds represented 42 percent of all worldwide mutual fund assets. The share of money market funds was 23 percent, while that of bond funds was 22 percent. Balanced/mixed funds represented 9 percent of the total. Table 3-1 represents the statistics.

Table 3-1: Worldwide Investment Fund Assets (31st Dec, 2003)

Billions fo US Dollars

Item/Year	1999	2000	2001	2002	2003
All Funds	11391	11871	11655	11324	14052
Equity	5878	5962	5134	4204	5926
Bond	2104	2077	2212	2529	3040
Money Market	2287	2483	2986	3190	3208
Balanced	971	1022	942	923	1205
Other	55	190	190	229	311

Source: FEFSI

The number of mutual funds worldwide stood at 54 015 at the end of the 2003. Of the 54 015 funds 8126 were US funds, i.e. 15% of the funds were from US. The much smaller market share of US in the number of funds than in the fund assets relates to the bigger size of the US funds. By type of fund, 41 percent of the funds were equity funds, 25 percent were bond funds, 21 percent were balanced/mixed funds, and 6 were money market funds. Table 3-2 represents the statistics.

Table 3-2: Worldwide Investment Funds: Number of Funds (31st Dec, 2003)

Item/Year	1999	2000	2001	2002	2003
All Funds	52745	51692	52849	54110	54015
Equity	22453	20381	22348	22975	22738
Bond	15434	13128	12183	11617	11890
Money Market	6745	4962	4277	4394	4974
Balanced	6375	11110	11155	11229	11499
Other	612	1000	1195	1310	1571

Source: FEFSI

What about the socially responsible investing in the US? Social Investment Forum's trend report 2003 states that in the US more than one out of every nine dollars under professional

management is involved in socially responsible investing. In monetary terms the 1/9 (or 11,11%) accounts for $2.14 trillion of the total $19.2 trillion in investment assets (not only mutual funds). SIF also states that while overall universe of assets under professional management has grown 174 percent from 1995 to 2003 the SRI assets have grown more than 240 percent, implying almost 40 percent faster growth rate.

According to SIF, of the $2.14 trillion in socially screened portfolios, $1.99 trillion are found in separate accounts and $151 billion are in mutual funds. The $151 billion represents 2% of the US mutual funds (in total 7,5 trillion) which is a much lower market share than SIF reports in total. The market share is in the same magnitude in the number of mutual funds: SIF reports 200 socially responsible mutual funds at the end of 2003, which account for 2,5% of the 8 126 funds in total. Thus, it seems that even if the 2% market share is much higher than the market shares of the European SRI mutual funds (as one can below perceive), the socially responsible investing has still a marginal role in the US mutual fund industry.

3.2 European Markets

In 2003 Europe accounted for 33,5% of the global investment fund markets. Inside the Europe three countries - France, Luxembourg and Germany - dominate the industry with a total market share of 58,6% at the end of 2003[9]. United Kingdom and Italy follow in this ranking with market shares of 8,8% and 8,3%. Table 3-3 summarizes the market share statistics.

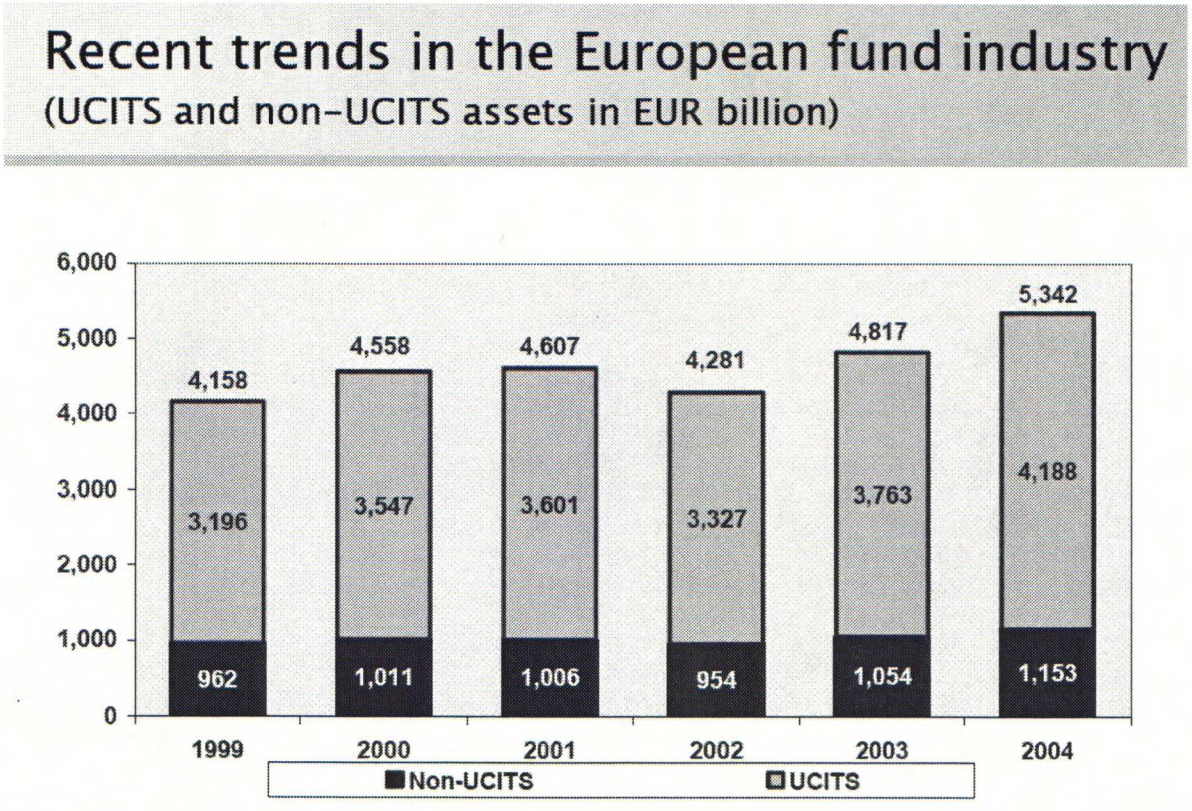
[9] The source of all statistical data related to general mutual fund market situation in this chapter are from FEFSI European Statistical Release (2003:Q4) and from FEFSI European Statistical Release (2004:Q4).

Table 3-3: Net Assets of the European Investment Fund Industry (31st Dec 2003)

	EUR m	Share		EUR m	Share
France	1 008 000 €	21,2 %	Switzerland	79 637 €	1,7 %
Luxembourg	953 302 €	20,1 %	Sweden	70 713 €	1,5 %
Germany	822 099 €	17,3 %	Denmark	48 934 €	1,0 %
UK	418 861 €	8,8 %	Greece	31 813 €	0,7 %
Italy	393 429 €	8,3 %	Portugal	27 763 €	0,6 %
Ireland	361 760 €	7,6 %	Finland	23 727 €	0,5 %
Spain	204 989 €	4,3 %	Norway	17 414 €	0,4 %
Netherlands	93 200 €	2,0 %	Liechtenstein	7 137 €	0,2 %
Austria	92 115 €	1,9 %	Poland	7 068 €	0,1 %
Belgium	83 503 €	1,8 %	Hungary	3 467 €	0,1 %
			Czech Republic	3 338 €	0,1 %
All Funds	4 817 000 €	100,0 %			
UCITs	3 763 000 €	78,0 %			
Non- UCITs	1 054 000 €	22,0 %			

As stated above, the value of the assets in European mutual funds reached €4,75 trillion by the end of 2003. This represents a growth of 16% from the end of the 1990's. The growth continued also in the year 2004. In the UCITS markets the growth rate was 11.3% in 2004 and in fund markets in total 10,9%. About 50% of this growth can be attributed to net inflows of new money and 50% to a positive performance effect. Figure 3-2 represents the growth statistics.

Figure 3-2: Growth Trends in the European Fund Industry, 1999-2004



Source: FEFSI

What about the SRI mutual funds in Europe? While the US market for ethical funds increased from $12 billion in 1995 to $151 billion at the end of 2003, the European market for ethical mutual funds is still at early stage of development. According to Avanzi SRI Research report 2003 the socially responsible investment funds account only for 0,36% of all the UCIT funds (see Figure 3-3). This is a much smaller market share than the SRI funds had in US (2%, see above.). Moreover, as Figure 3-4 shows, the investments to the SRI funds seem to have actually declined 16% between December 2001 – June 2003. However, this decline is due to the declined stock prices rather than to actual outflows.

Figure 3-3: % of SRI Fund Assets of European UCIT Fund Assets

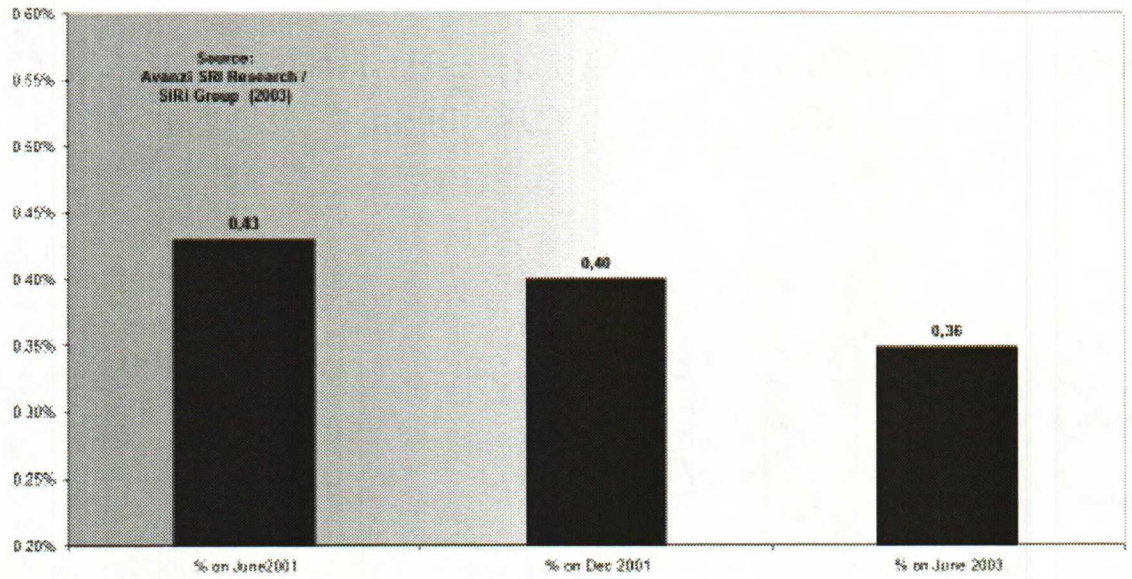
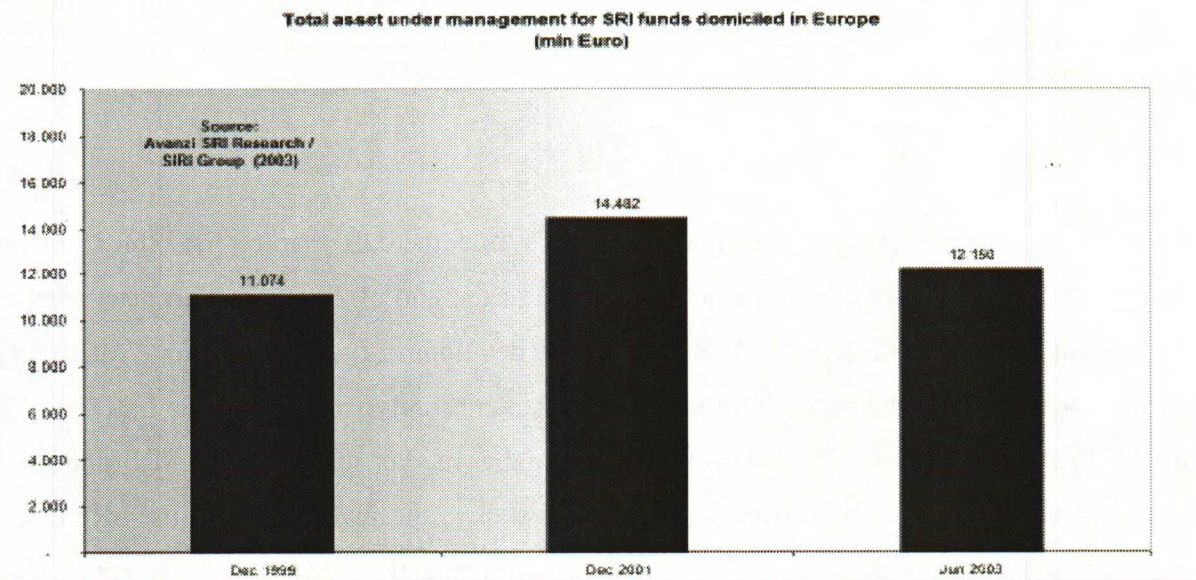


Figure 3-4: Total Assets under Management for SRI funds Domiciled in Europe



Even though Europe in total lags remarkably behind US, there are prominent differences also inside the Europe. For example, the statistics from Bauer et. all (2005) report the situation in 2000 (see, Table 3-4). At that time the frontrunners in the proportional statistics were Sweden, The Netherlands and the United Kingdom, i.e. totally different countries than those

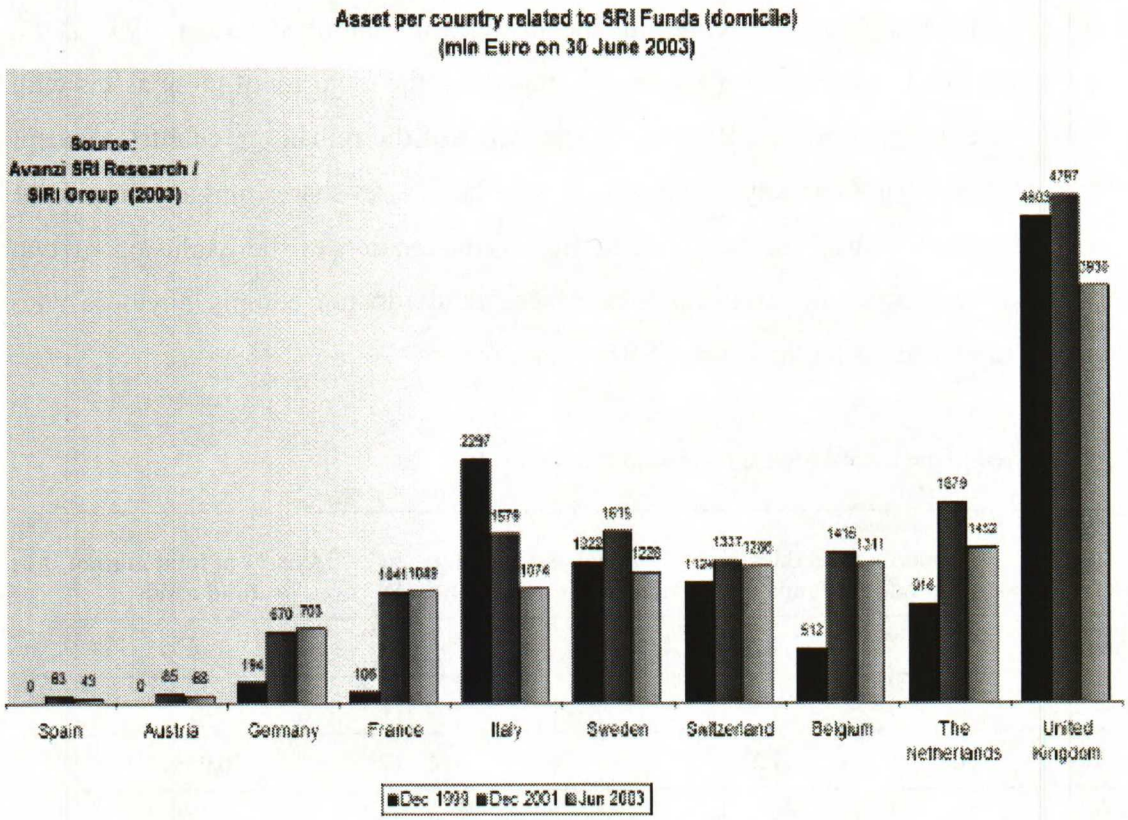
that dominate the general mutual fund industry in Europe. On contrary, France and Germany rank last with 0,01% and 0,04% investments in ethical funds. The same three countries – UK, Sweden and the Netherlands – lead also the statistics of the absolute assets in ethical funds in 2003. Figure 3-5 represents the absolute amount of SRI assets 1999-2003. In the figure year 2003 As Figure 3-5 shows, UK makes up the majority of these assets with nearly 32% of the total European SRI retail assets. Most of the remaining countries except for the smaller markets in Germany, Spain and Austria have asset shares ranging from 8,5% to 12%. The interesting drop of the assets in Italy is in relation to the exclusion of two relatively large funds from the statistics, since these funds do not comply anymore with definitions set to SRI funds by the Avanzi SRI research.

Table 3-4: Overview of the Ethical Mutual Fund Market as of 30th Dec 2000

Country	Number of ethical mutual funds	Ethical assets under management in million USD	As a % of total mutual fund assets
Belgium*	26	602	0.80%
France*	14	371	0.01%
Germany	22	1 317	0.04%
Italy*	5	2 077	0.45%
Sweden*	42	119	1.46%
Switzerland*	22	1 011	1.12%
The Netherlands	11	1 309	1.20%
United Kingdom	55	639	1.35%

*) As of 31st Dec 1999 (Source: Bauer et al., 2005.)

Figure 3-5: SRI Fund Assets per Country (30th June, 2003)

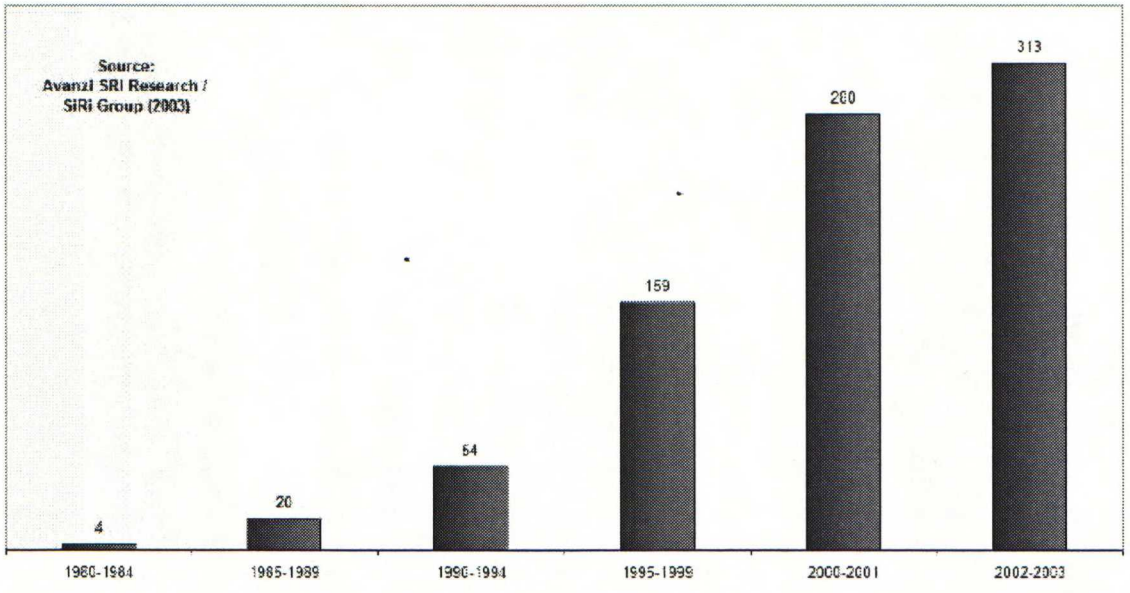


Whereas Europe lags behind US in monetary terms, Europe is deemed to be the leader in the current SRI development. Europe has adopted new regulation and legislation encouraging disclosure and increasing investment, e.g. by retirement accounts. For example, UK has adopted a new Pension Act in 2000 that requires pension funds to inform the extent to which social, environmental and ethical considerations are taken into account in the security selection and several countries consider same kind of legislation changes. (Social investment Forum 2003, p.31). This implies a more mainstream policy position for SRI in Europe in the future.

Perhaps foreseeing the future possibilities of the SRI, the supply side of the SRI funds do not show same kind of recession as the demand side. As Figure 3-6 shows, the number of funds has risen almost 100% since the end of 1990's. The current amount on 30th June 2003, 313 funds, represents also a 18% increase since the end of 2001. However, overall it can be said

that the entire ethical mutual fund market still presents only a marginal part of the traditional market.

Figure 3-6: Number of SRI Funds in Europe (1980-2003)



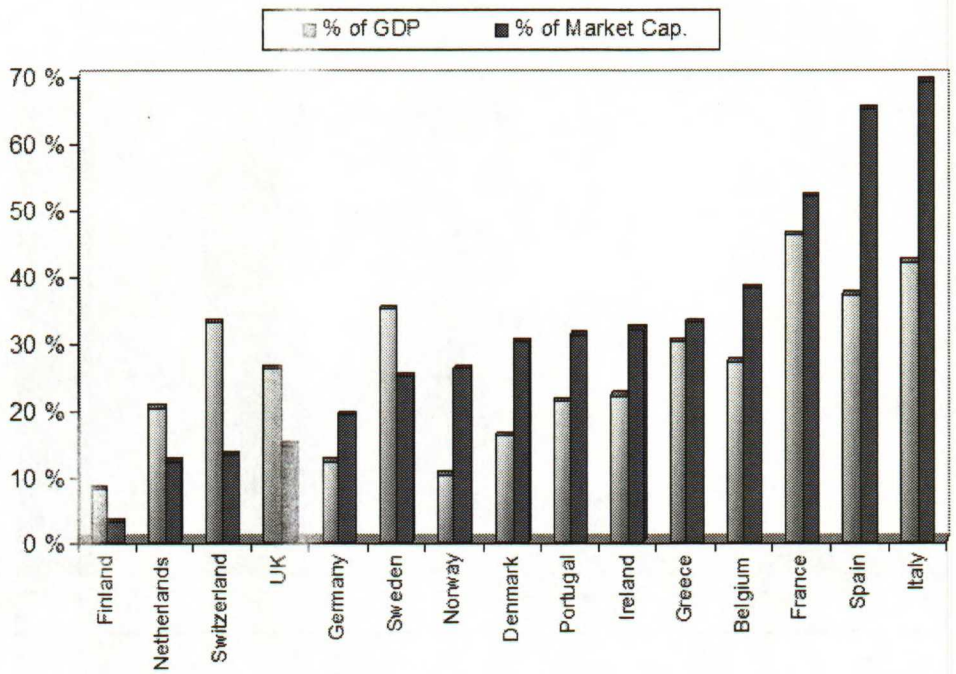
3.3 Finnish Markets

Even though the Finnish financial markets can be said to be well developed, the history of the markets is very short. Before 1987 the Finnish financial economy was closed and managed by the Bank of Finland. In 1987 the financial markets were released and at the very same year also the first Finnish mutual fund was established (Puttonen ja Kivisaari, 1997, p. 10-14).

The short history can be seen also in the comparison of the Finnish mutual fund assets to gross domestic product and to total market capitalization (Figure 3-7). At the end of 1990's the net assets of Finnish funds as a percentage of GDP and market capitalization amounted to only 8% and 3%, respectively. As a point of comparison the comparable figures for Sweden are 35% and 25%, respectively. In the light of market capitalization Italy was the

most developed country (69%), while the French market is the most matured (46%) when the GDP is used as a measure.

Figure 3-7: Net Asset Values of Mutual Funds as a Percentage of GDP and Market Capitalization in Europe (31.12.1999)

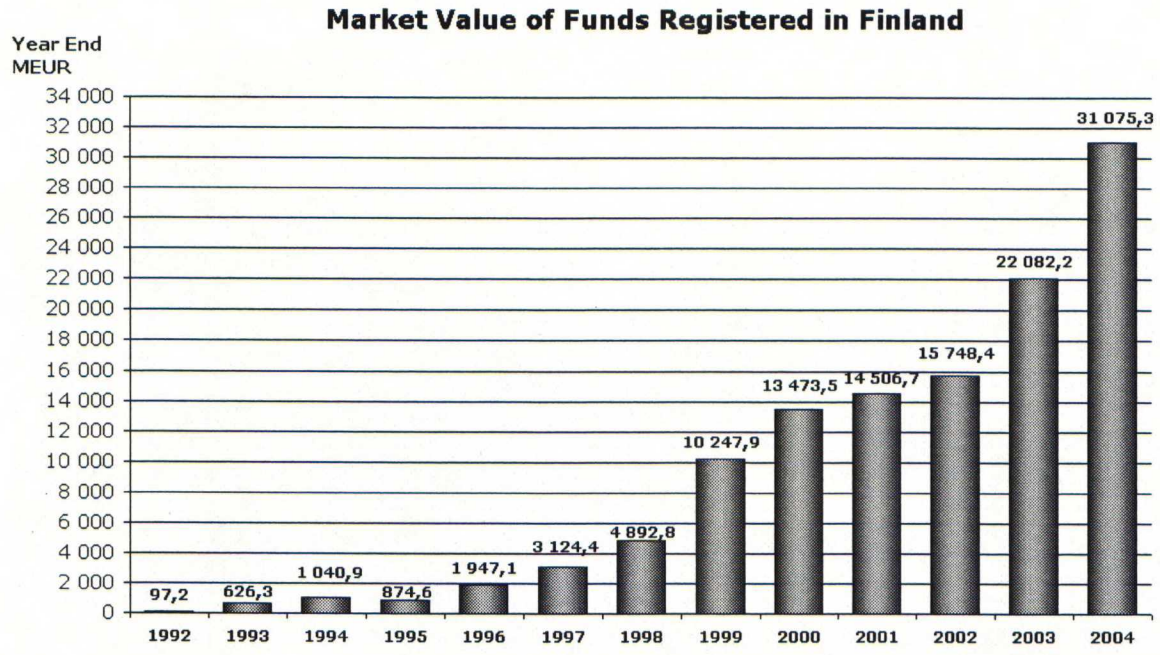


Source: Sandvall, 2001, p.16.

However, after the 1999 Finnish mutual fund industry has faced remarkable growth and thus reduced the lead of other European countries. As Figure 3-8 shows, the market value of the fund assets has increased by more than 300% to €31 billion. While at the same time the market capitalization has contracted from €349 billion to €159 billion[10], the mutual fund assets account for 19,5% of the market capitalization. Also the percentage of GDP has risen: by the end of the year 2004 the mutual fund assets accounted for 20,8% of the GDP[11].

[10] Source: HEX , monthly market reports 12/1999 and 12/2004.
[11] Source: Statistics Finland

Figure 3-8: Market Value of Mutual Funds Registered in Finland, 1992-2004



Source: The Finnish Association of Mutual Funds

Compared to the European leaders in the SRI markets, Finland is still in its infancy. At the end of 2004 there were 14 investment funds listed in HEX that can be classified as socially responsible. Of these funds only 6 were registered in Finland. For example, Sweden had already in 1999 42 ethical funds accounting for 1,46% of the total fund assets (see Table 3-4). As Table 3-5 shows, the total market capitalization of the Finnish SRI funds is €113,6 million. This accounts only for 0,37% of the total Finnish fund assets (€ 31 075,3 million), and is close to the European average 0,36%. Even though one would add the market capitalization of other SRI funds listed in HEX but not registered in Finland, the SRI funds would count for only 0,63% of the total fund assets.

Table 3-5: SRI Funds Listed in Hex (31st Dec 2004)

Funds Registered in Finland			Other Funds		
Fund	**Market value M/€**	**Start date**	**Fund**	**Market value M/€**	**Country**
Celeres HR Suomi	3,1	04/2004	A Berg./ABN Sos. Resp. Equity	4,8	Luxembourg
Gyllenberg Forum	36,4	06/2000	JPMF Global Sos. Responsible	16,3	Luxembourg
OP- Kestävä Kehitys	33,6	10/2002	Picket European Sust. Equity	40,2	Luxembourg
Pohjola Vision	9,9	10/1999	Robur Miljöfonden	0,1	Sweden
Sampo Kestävä Arvo Korko	18,9	04/2003	SEB Lux Fond - Ethical Global	8,6	Luxembourg
Sampo Kestävä Arvo Osake	11,7	11/1999	SEB Lux Fund - Ethical Europe	12,8	Luxembourg
			SEB Östersjöfond/WWF	15,6	Sweden
			Svenska Kyrkans V.p.fond	0,0	Sweden
TOTAL	**113,6**		TOTAL	**82,8**	
TOTAL	**196,4**				

4 PREVIOUS STUDIES ON SOCIALLY RESPONSIBLE MUTUAL FUNDS

4.1 Performance Studies

In 1952 Harry Markowitz published a model of portfolio selection that explains how diversification and allocation of resources can be managed to construct portfolios with the highest expected return on a given amount of risk taken i.e. the efficient or optimal portfolio. Putting up restrictions or screens, ethical or otherwise, in creating portfolios affects the universe from which the investment targets are selected. The traditional argument is that screening reduces the universe of securities available and thus the optimal portfolio can not be constructed. This is because under the hypothesis of efficient markets, the market portfolio will outperform any subset of the market when adjusted for risk. Kurtz (1997) deems this CAPM line of analysis, where more efficient the market, the more obvious the negative effect of SRI on performance should be, as the Markowitz View. Moreover, Michelson et al. (2004) state that the relatively small size of most of the ethical funds mean that the ratio of the management fees and expenses to total income of the funds may be higher than in conventional funds. SRI funds also need to collect specialized information

data concerning the ethical practices of the investment targets in addition to the financial analysis.

At the same time another view, which was first brought up by Moskowitz (1972), argued that SRI portfolios could actually outperform the market. This is because the portfolios can incorporate information not widely understood or accepted by the markets. This is deemed by Kurtz as the Moskowitz View. In addition, it is argued that in these times of 'quarter economy' markets are too short sighted and focus too extensively to the short run performance. Michelson et al. represent a view that ethical investment operates with longer time horizon than conventional investment and benefit in the long run from such aspects as higher product safety and lower frequency of litigation and worker turnover reducing operating costs.

The empirical evidence on the effects of social screening on portfolio performance in aggregate seem to show that ethical screening does not significantly affect risk-adjusted performance. The results are in the line in all the sub-groups of the performance studies; the studies on portfolios of individual stocks, index studies and mutual fund studies. To begin with, Grossman and Sharpe (1986) compared South Africa –free portfolios to comparable conventional NYSE portfolios. They found a 1,87% SRI out-performance per year between the period 1960-1983 but it was mainly due to the size effect[12]. After adjusting the small-cap bias they were unable to find out-performance for the whole time period: the statistically significant over-performance still existed in the sub-period between 1960-1975 but not in the period 1975-1983.

In more recent US study Diltz (1995) examined 159 stocks in the time period Jan 1989- Dec 1991. He employed a matched pair analysis by constructing pairs in which other stock portfolio performed favorably on one or more social criteria while the counterpart was rated poorly on the same criteria. Using Jensen's Alpha and cumulative excess returns he found no statistical significant differences between the contrasting stocks. In another study Guerard

[12] *Size effect* or *small firm effect* is one of the most important anomalies with respect to the efficient market hypothesis. It means that both total and risk-adjusted rates of return tend to fall with increases in the relative size of the firm (see, for example, Bodie et al., p. 347). It is perceived that investment targets considered to the socially responsible are more likely to be small. This is the case since larger companies tend to be involved in various businesses and are thus easily screened out by negative screens. Thus, part of the out-performance of ethical investments may be due to the small firm effect.

(1996) examined monthly returns between 1987-1994 from a sample of 950 socially screened firms against a control sample of 1300 unscreened firms. Again, he found no significant differences between the two groups but found evidence for small-cap bias.

In the second line of the research, index studies, several studies have investigated the performance of the US Domini Social Index (DSI)[13] against benchmark index. Luck and Pilotte (1993) found that the DSI outperformed the S&P 500 in the period 1990-1992. Furthermore, Sauer (1997) analyzed the DSI returns in relation to S&P 500 and CRSP Value-Weighted Market Index for the 1986-1994 period and reported insignificant risk-adjusted over-performance of DSI.

In the third line of the research, researchers have examined the performance of socially responsible mutual funds and compared these funds to market indices and to conventional unscreened mutual funds. For US, Hamilton, Jo and Statman (1993) examined the performance of 32 ethical mutual funds using Jensen's Alpha and compared them to large random sample of conventional funds. They concluded that there is no significant risk-adjusted over- or under-performance of socially responsible equity funds relative to their conventional peers over the 1981-1990 study period. Statman (2000) extended the period to include most of the 1990s and found similar results. Both of these studies also show that, as is the case with funds in general (see, for example Puttonen (1997, p.124) or Gruber (1996)), socially responsible mutual funds have a tendency to under-perform their relative market indices.

For the UK market Luther, Matatko and Corner (1992) found weak evidence in favor of socially responsible funds' out-performance of general market indices. However, they stated that the investments of ethical trusts are too varied and too closely correlated with low yield to allow simple evaluation of an ethical effect on unit trust returns. Additionally, they reported that there is clear evidence that the ethical trusts have UK investment portfolios more skewed towards small market capitalization than the market as a whole, and they tend to be invested in low dividend yield companies.

[13] DSI can be seen as an ethical version of S&P 500 index. Domini 400 Social Index consists mainly of the same funds as S&P 500 index, but excludes the 100 companies that perform most poorly ethically (Sparkes, p. 296-300).

For the UK market as well Mallin, Saadouni and Briston (1995) matched ethical funds to their conventional peer using the fund size and the formation date as the matching principle Their study covered the period 1986-1993. They concluded that while both ethical and non-ethical funds tend to under-perform the market on a risk-adjusted basis, the ethical funds tend to out-perform the conventional funds, especially when measured by the Jensen's Alpha.

While most of the European ethical fund performance studies have focused merely to UK data, Kreander's (2002) study included funds also from other European countries. He used a matched pair approach and compared 40 socially responsible mutual funds with 40 conventional funds. The study covered a three-year period between 1996-1998 and embodied mutual funds from 7 countries: UK, Sweden, German, Netherlands, Norway, Switzerland and Belgium. The results of the study suggest that no significant difference in the risk-adjusted financial performance exists between the ethical and conventional funds. However, while Kreander et al. found no differences in the returns, they found some evidence that ethical funds are less risky than their more conventional counterparts.

The most recent international study found by the author is the study of Bauer, Koedijk and Otten (2005). They evaluated the performance of 103 socially responsible mutual funds from US, UK and Germany in the 1990-2001 time period. Their results indicate no significant evidence for over- or under-performance of socially responsible funds relative to their conventional peers. Again, the findings that ethical funds under-perform relative to indices and that ethical funds are characterized by a small-cap bias are verified. Moreover, the results suggest that ethical mutual funds underwent a catching up phase, before delivering financial returns similar to those of conventional mutual funds.

Tuokkola (2004) studied the returns of socially responsible mutual funds in the Finnish market in the time period 2000-2003. His study covered 10 ethical funds of which 4 were located in Finland, 5 in Sweden and one in Luxembourg, but all of the funds were listed in Hex. Tuokkola both compared the returns to the index returns and also used matched pairs – analysis. Again, almost all the funds underperformed (nine out of ten) the market indexes as the case also was in international studies. The underperformance was not, however, statistically significant. The findings of the matched pairs –analysis also supported the

findings of international studies. Ethical funds outperformed slightly their conventional counterparts both in raw returns and risk-adjusted returns, but only one fund outperformed statistically significantly.

4.2 Studies on the Investor Characteristics

Normally investment strategies can be based on a risk-return trade-off formulation for the representative investor, which is basis of contemporary financial theory. However, there is a complexity in segregating an ethical investment from other investments: Whether ethical investment indicates a concern for social values or not, it appears there is a strong element of investor subjectivity embedded in the related investment strategies. This subjectivity contrasts with the objectivity of the risk and return measures. The question is, therefore, are ethical investors a special breed significantly different from the representative investor?

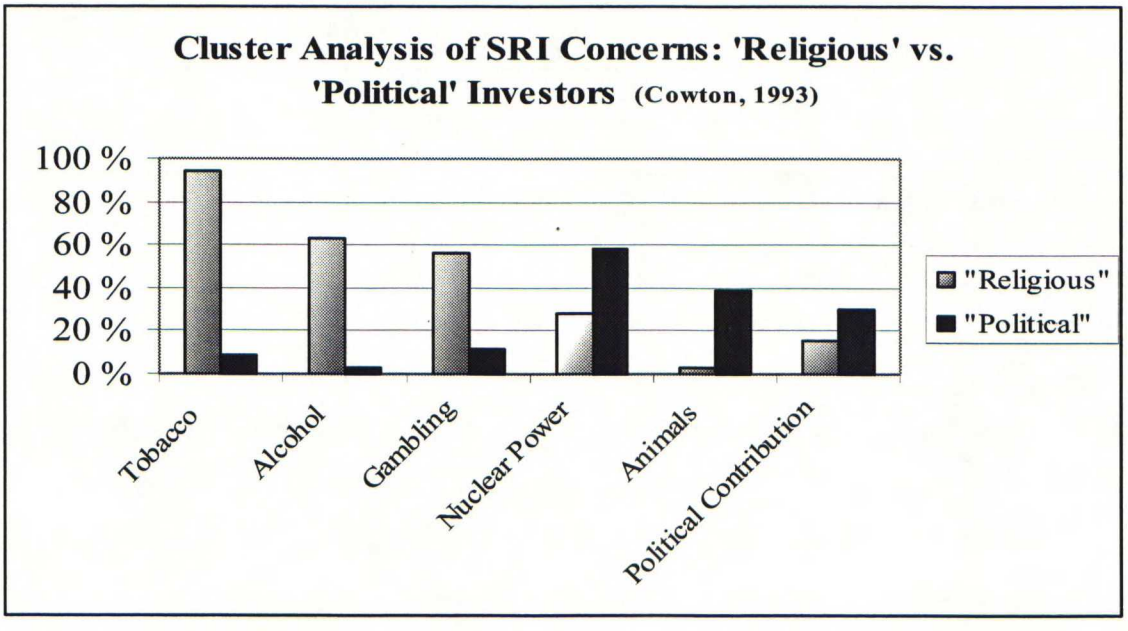
Even though the performance of the SRI funds is studied much more extensively than the characteristics of the socially responsible investors, there are some studies that handle that subject as well. The findings of these studies are discussed below in three sub-paragraphs. The first one identifies the key issues important for average SRI investor and the second one looks into the demographics and socio-economical status of the investors. Finally, the importance of the financial return to ethical investors is discussed.

4.2.1 The Key Issues for Socially Responsible Investors

One of the pioneering attempts to study the public's social responsibility concerns systematically was the research of Chris Cowton and Paul Anand in 1989. They studied the opinions of clients of the ethical investment research service EIRIS in England. The study focused merely on the importance of different exclusion screens and found out that the most important factors to the investors were the exclusion of the armaments industry and operations in the South Africa. The latter finding, of course, is very time-bounded and no more up-to-date.

One of the most interesting aspects and perhaps also a more long-run finding is the discovery of two clusters among ethical investors. These two clusters, called 'religious' and 'political', constituted half of the investors while similar patterns were not found among the other 50%. These two groups diverged in that sense that while the traditional 'sin stocks' of alcohol, tobacco and gambling were highly important to the 'religious' group, these were of little interest to the 'political' group. On the contrary, the 'political' group showed more interest to the issues such as nuclear power and political contributions of the companies. The key differences of the interests of these two groups are shown in Figure 4-1, where the issue in question is presented in the horizontal axis and the percentage of investors in the vertical axis.

Figure 4-1. Percentage of ethical investors supporting different concerns: 'religious' vs. 'political' investors (Cowton, 1993).



Also Dr. Thesere Woodward has studied the same topic (Woodward, 2000). Her sample consisted of UK people who were either highly interested in investing socially or had already invested in SRI funds. She founded same kind of two clusters that Cowton in her sample, although the concerns of the two groups seemed to wider than in the Cowton's study. The 'religious' investors put a high weight to exclusion of war machinery and animal exploitation and inclusion of products that enhance 'the quality of life' in addition to the exclusion of the 'sin stocks' alcohol, tobacco, and gambling. On the other hand, the 'political

group' showed high interest also in the environmental factors. They also emphasized the fair treatment of employees and suppliers and the non-abuse of power.

What are then the most important factors when considering the social investors as a one group? The study of Woodward tries to answer also to this question. She presents the importance of different social screenings in three vectors: the produced product or service, the production process and the philosophy of the screened company. Her findings of the most important screens in these factors are presented below in Table 4-1:

Table 4-1: Important issues for UK SRI investors in 2000:

Process/Philosophy	Important (%)	Product	Important(%)
Third World People	98 %	Armaments	97 %
Fair employment	98 %	Protecting environment	94 %
Openness	97 %	Improving environment	91 %
Efficient material use	95 %	Pornography	87 %
Environment pollution	93 %	Tobacco	86 %
Community relations	92 %	Gambling	82 %
Repressive regimes	92 %	Nuclear power	82 %
Sustainable materials	91 %	Basic Requirements	72 %
Animal test cosmetics	89 %	Health	51 %
Director remuneration	79 %	Alcohol	51 %

As table 4-1 shows, the attitude towards third countries, treatment of the employees and the openness of the company stand out from the philosophy side as over 90% of the responders feel these issues important. Furthermore, over 90% emphasis the eco-efficiency and the fairness of the supply chain (repressive regimes). In the output side the exclusion of armament, pornography and tobacco industry as well as inclusion of sectors producing environment protecting or amending products was seen essential.

However, when discussing about the preferences of socially responsible investors one should note that the importance of different SRI criteria can and do vary remarkably between different countries: For example, in the Europe the employment considerations often stress 'inclusivity' i.e. that emplyees are included in the management decisions, or that the wages of the senior management do not exceed certain limits compared to normal workers salaries. On the other hand the US SRI investors are very concerned about racial diversity i.e. that ethnic minorities are well presented in the senior management of a company. (Sparkes, 2002, p.85).

4.2.2 The Demographic Profile of the Socially Responsible Investors

One of the first attempts to identify the typical SRI investors was a study published in 1991 by Professors Rosen et al. from New York University. They constructed their hypothesis on the basis of findings of socially concerned consumers in general such as those who recycle or use non-polluting household products. As Murphy (1978, p. 316) had summarized the special characteristics of this consumer niche, these consumers were "younger, better educated and more affluent than the general populace".

The socially responsible investor data was collected by a mail survey from 4000 ethical investors who had invested in US SRI funds. Rosen compared the characters of ethical investors to general mutual fund investor population. The findings of the study made by Rosen et al. showed similar results than the findings of socially responsible consumer studies: The social investors turned out to be younger and better educated than the general mutual fund investor population with the median age of 39 years compared to the 52 years in the reference group. However, the hypothesis of better income did not found support.

Also Lewis (2001) has found similarities between socially responsible consumers and ethical investors. Firstly, in his UK mail survey he concludes that the ethical/green investing can be seen as an important part of the investor's lifestyle. Moreover, he found a strong occupational bias towards the caring professions such health, social work and education. These findings have also been evidenced by other studies (for example Campanale, 1996). Secondly, the study of Lewis and Mackenzie (2000) concluded that the social investors tend to take "an active part in established political parties, religious and charitable institutions, and pressure groups".

One of the most thorough and perhaps most interesting study is the paper of Tippet and Leung (2001). They studied the differences between Australian investors who have sought advises from a financial adviser specialized in ethical investment and two reference groups. The first reference group was a random sample of equity investors of a big Australian company. The second was a sample of members of The Australian Shareholders' Association which aims to protect and advance the rights of minority shareholders in the means of actively contributing companies to employ "fair and efficient corporate governance

and business ethics". The mail questionnaire was send out to a sample of 699 investors and got 296 responses, the effective response rate being 43%.

The studied demographic and socio-economical factors were the gender, age, level of education, employment status and diversification and size of the portfolio. The main findings of the study were a strong evidence of a gender effect, with females predominating among ethical investors. While in both of the reference groups over 55% of the investors were men, in the ethical investor group 61% were females. The ethical investors also turned out to be relatively young compared to both of the reference groups: while in the ethical investors group 42% of the investors were under 45 years the corresponding figure among the equity investors was 26%. The study showed also bias towards higher education and less-diversified portfolios.

The Australian investors were also studied in a recent study of McLachlan and Gardner (2004). Their mail questionnaire study got an effective response rate 31% resulting in data of 55 conventional and 54 ethical investors. The study examined the age, education and income level and psychological factor differences between the two investor groups. The study found differences between the psychological factors, for example in the decision making style. On the contrary, the study found no support to the demographical differences. However, because of the small size of the sample and low response rate the findings of this study should be interpreted with caution. The study is still an indication that it is not self-evident that the differences between the two investor groups exist.

4.2.3 The Importance of the Financial Return

The literature and research discussing the importance of the financial return is somewhat contradicting. The majority of the literature emphasizes strongly the importance of the financial return also to socially responsible investors (See, for example Sparkes, 2002, p. 26-27). Accordingly, Rosen et al. (1991, p.221) report that the socially responsible investors "are unwilling to sacrifice the financial return".

However the study of Lewis and Mackenzie (2000) report somewhat different results. They conclude that the preferences of social investors are relatively price inelastic to small

decreases in the financial return. On the contrary, only a small rise in the returns increases investors' willingness to raise their ownership in the ethical investments.

As Table 4-2 shows, 20% reduction in the return don't affect to the willingness to invest in ethical security. The majority (80,8%) stay with ethicals where the return is 8 percent from ethical compared with 10 percent from ordinary unit trust. Moreover, even in the case of as extreme return difference as 50 percent only 35,8% of the social investors are willing to reduce their ownership in the ethical security. On the contrary, a 2 percent better return from the ethical investment would result in the increase of the ownership of that security among the majority (61,1%) of the investors .

Table 4-2: Effect of SRI Relative Returns on Investor Behaviour

Effect of SRI Relative Returns on Investor Behavior				
	Comparative Returns	**Reduce Ethical**	**Do Nothing**	**Increase Ethical**
Ethical Return	8,0%	5,2%	80,8%	12,9%
Standard Fund	10,0%			
Ethical Return	5,0%	35,8%	56,5%	3,6%
Standard Fund	10,0%			
Ethical Return	12,0%	0,6%	34,3%	61,1%
Standard Fund	10,0%			

One explanation to the inelasticity to return decreases is the 'portfolio approach' to ethical investments: The basic assumption is that the the ethical investment normally presents only a small portion of an individual's wealth (Sparkes, 2002, p.84). This means that the investor can be relatively indifferent to the financial performance of the ethical investment. This may be true at least in that group of the investors who put a small number of their money in the ethical funds to balance their otherwise hedonistic lifestyle. (see paragraph 2.1 'General Idea' for further information).

Lewis and Mackenzie (1999, p.449) use a concept comparable to the 'portfolio approach'. They state that many investors seem to have a certain core amount of money they consider to be essential to their financial requirements – for example for retirement, housing, or to bequeath to the children. Additionally, they have an amount of money that is surplus to these

requirements. While a small amount of return on the core money can be traded off for the sake of the ethics, this money must produce a reasonable return. On the other hand, the money considered to be surplus can be traded off for ethics quite aggressively.

5 DESCRIPTION OF THE EMPIRICAL STUDY

As stated in paragraph 2.1, socially responsible investors are persons who gain utility from engaging in social or environmental matters in addition to the financial utility they get from the investment. Thus, they do not completely fit to the traditional rational investor definition. But who these people really are? How old are they? Were they live? How much they have invested in a socially responsible way? The research question of this study is to find out the answer to the questions stated above. Moreover, the aim is to examine whether the investors investing in socially responsible investment alternatives differ from investors investing in 'normal' investment targets. Because the findings of previous studies indicate that such differences may exist, the assumption is that investors investing in SRI differ from 'normal' investors in their demographics.

The empirical part of this study is constructed as follows: Paragraph 5.1. introduces the hypotheses and paragraph 5.2. the data. Paragraph 5.3. looks into the quantitative methodology. Paragraph 5.4. discusses the possible limitations of the study. In the paragraph 6 the empirical study is completed and paragraph 7 discusses the conclusions.

5.1 Description of hypotheses

The data is tested by 4 different hypotheses. Hypotheses 1 and 2 are studied in the international peer studies referred in the Paragraph 4.2.2. However, the hypotheses are not studied in Finland before. Hypotheses 3 and 4 are based on the findings of socially responsible consumer studies and are justified below in more detail.

In international peer studies the socially responsible investors are found to be younger and more likely to be female than the general investor populace. Two of the three peer studies that have studied the age and gender factors have found proof for this statement. Moreover,

as Lewis(2001) has found out in his study, the ethical investment style is likely to be an integral part of the investor's lifestyle. Protection Manager Jari Luukkonen from WWF (Uutislehti 100, 15th September 2004, p. 2) states that over 70% of the persons showing interest in voluntary work are under 35 years old and most of them are women. As the ethical investment style is probable to be a part of the investor's lifestyle it is likely that same kind of characteristics could be found among ethical investors.

Hypothesis 1. The Age of the Investors:
"The investors investing in socially responsible mutual funds are relatively younger than the reference investors".

The dominance of young investors in the ethical group is also supported by the behavioural theory of Malkis and Grasmick (1977). They argue that young people are less integrated to the economic and social system. Because solutions to environmental and social drawbacks often threaten the existing social order and require substantial changes to the traditional values it is logical to expect the young to support environmental and social reforms more readily than their elders.

Hypothesis 2. The Gender of the Investors:
"The investors investing in socially responsible mutual funds are more likely to be women than the reference investors".

In addition the lifestyle theory of Lewis the gender hypothesis can find support from the behavioural theories. Passino and Lounsbury (1976) argue that males are preoccupied about jobs and economic growth and thus are less concerned than females about the social and environmental issues. The author feels that since women are nowadays, at least in Finland, an active part of the workforce, the argumentation of Passino and Lounsbury may be out-to-date. Perhaps a better argumentation to the hypothesis can be quoted from Eagly (1987). She sates that the reason for women being more concerned about the social and environmental concerns lies in the society's expectations. The idea is that people's own attitudes and values are affected by societal gender roles and people apply the stereotypic expectations to themselves. The expectations in turn can be summarized in two dimensions. The other dimension of gender stereotypic beliefs is characterized by a concern for the welfare of

others, and women are believed to manifest this concern more than men. A greater concern about the effects of their actions on others suggests that females will put higher weight on the social and environmental consequences of the investment decision and thus are more likely to invest ethically than their male counterparts.

Hypothesis 3. The Residence of the Investors:

"The investors investing in socially responsible mutual funds
A) residence souther and
B) have a higher percentage of urbanization than the reference investors".

The author did not find any peer studies that would have studied the residence differences. The residence hypothesis can, however, find support from the environmental theories of Tremblay and Dunlap (1978). First, they state that the urban residents should be more concerned with environmental problems because they are generally more exposed to higher levels of pollution and other type of environmental deterioration. Second, they argue that rural residents have a more utilitarian orientation toward the natural environment because of their involvement in occupations such as farming and logging. They even argue that even rural residents not engaged in nature-extractive occupations can be expected to hold utilitarian attitudes toward the environment because of a shared rural culture. Moreover, Samdahl and Robertson (1989) have found evidence that the size of the local residential community was positively associated with perceptions of environmental problems. As urban populace is expected to be more concerned about the environmental problems it can be assumed that they are trying to take environmental issues into consideration in their actions - also in their investment actions. Thus, the urban investor is more likely to invest in ethical (in this case, *environmental)* fund than the rural investor. Moreover, as most of traffic and industrial production takes place in the south the same assumption can be placed to souther and norther investors.

Hypothesis 4. The Amount Invested to the Fund:

"The investors investing in socially responsible mutual funds have invested smaller amounts to the SRI funds than the reference investors to reference funds".

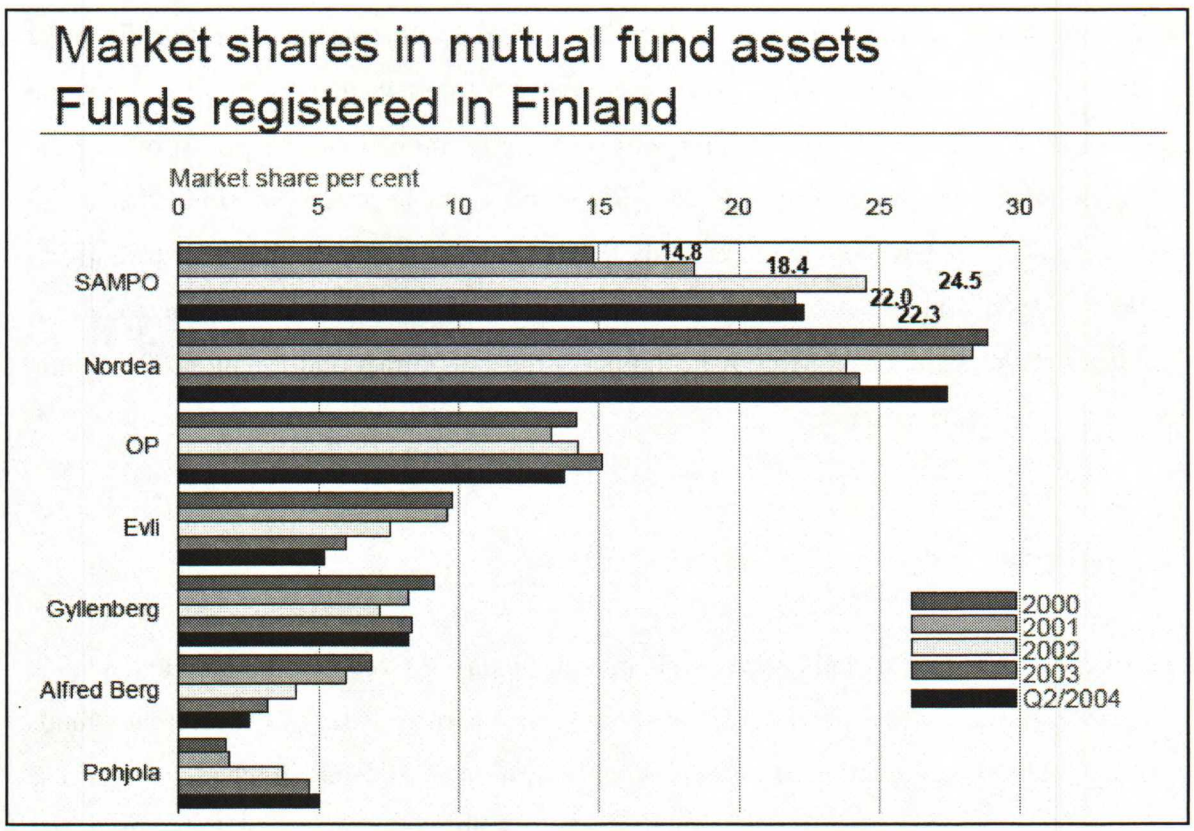
The smaller ownership hypothesis can find support from the concept of Lewis and Mackenzie (1999) comparable to the 'portfolio approach'. They state that many investors seem to have a certain core amount of money they consider to be essential for their financial requirements. Additionally, they have an amount of money that is surplus to these requirements. While a small amount of return on the core money can be traded off for the sake of the ethics, the money considered to be surplus can be traded off for ethics quite aggressively. In their UK questionnaire study they found also evidence that a clear majority of ethical investors have 'ethically mixed' portfolios holding 'clean' and 'not so clean' investments at the same time. Moreover, the peer study of Tippet and Leung (2001) found evidence of smaller investments.

5.2 Description of data

The data consists of two socially responsible mutual funds – a fixed income fund and a stock fund - and three reference mutual funds. In addition the characteristics of the reference funds are compared to the characters of straight stock investors of Helsinki Exchanges. Because the first represents a sample of mutual fund investors - not shareholders, the characters are not assumed to be completely equal. However, the comparison is expected to give some indications about the validity of the reference group.

All the funds in this study are mutual funds of Sampo Bank. The reason for choosing Sampo Bank funds is the centrality of its assets at the Finnish mutual fund market: In year 2002 Sampo was the leading mutual fund provider in the terms of the fund savings and at the end of 2003, Sampo was the second-largest mutual fund management company with a 22 percent market share. Figure 5-1 shows the development and current market shares in the Finnish mutual fund market.

Figure 5-1: Market shares in the Finnish mutual fund market



Source: Sampo's[1] Interim Report 1.1.-30.6.2004, Presentation slides 16.8.2004

In addition being one of the biggest mutual fund providers in Finland, Sampo has also been active in the socially responsible mutual funds. In year 2003 Sampo introduced Finland's first fixed income fund that emphasizes sustainable development in its investments (Sampo[2] Annual report 2003, p.13). Also Sampo's social investment fund investing in stocks is one of the oldest ones in Finland. According to Susanna Miekk-oja from Sampo Fund Management Ltd in year 2002 Sampo was clearly number one in ethical funds: the investor base of Sampo's ethical fund was around 1300 investors of the 1800 Finnish ethical mutual fund investors, giving Sampo a market share around 70% (Kauppalehti Online, 4.11.2002).

The two selected socially responsible mutual funds were Sampo Sustainability Bond (Sampo Kestävä Arvo Korko) and Sampo Sustainability Equity (Sampo Kestävä Arvo Osake). The first one invests only in the fixed income securities while the latter invests in the stock markets.

The data consists of the ownership structure of the funds at 30th September 2004. It indicates the birth year and gender of every private investor, and the sum invested to the funds, the place of domicile and postal code for both private and institutional investors.

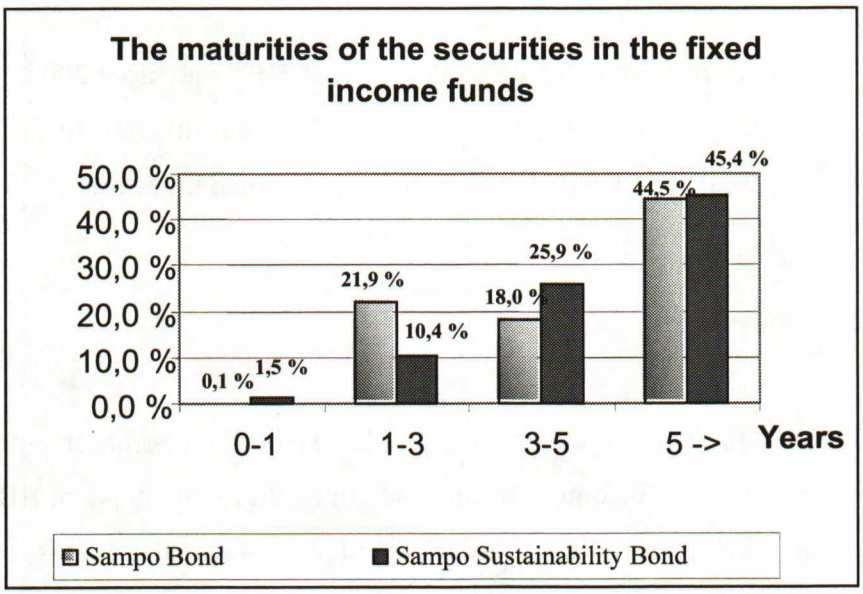
5.2.1 The Fixed Income funds

Sampo Sustainability Bond is quite a new fund and has started to operate in April 2003. It invests in euro-dominated fixed income instruments with credit rating above or BBB- (S&P). In the basic situation half of the funds are invested in government bonds and half to corporate bonds. (Sampo Bank [3])

The reference fund - Sampo Bond (Sampo Obligaatio) – invests also in the euro-dominated fixed income instruments. Moreover, also in this fund the credit risk is quite moderate: the fund invests only in securities that have a credit rating at or above BBB- (S&P). Similarly the portfolio of this fund has a strong weight in government bonds: 33% of the funds assets are invested in Finnish government bonds and 51% to bonds of other governments (situation at 14th October, 2004). (Sampo Bank [4]).

Furthermore, the funds share a similar interest rate risk: the duration of the funds is very equal: 4,8 in the sustainable development fund and 5,3 in the reference fund. Figure 5-2 compares the maturities of the securities in the funds. The overall risk exposure of the two funds seem to be very similar: the reference found has a higher portion of government bonds in its portfolio and thus lower credit risk but, on the contrary, its duration and thus the interest rate risk is moderately higher.

Figure 5-2: The maturities of the securities in the fixed income funds



5.2.2 The Stock Funds

The Sampo Sustainability Equity fund has operated much longer than Sampo Sustainability Bond – it was established in 1999. In fact, Sampo Sustainability Equity was first a balanced found investing on average 75% to stocks and 25% to fixed income securities. The investment strategy was changed to pure stock basis in 2003 when Sampo Sustainability Bond was established.

Because of the history as a balanced fund, two different reference funds are chosen: one balanced fund and one stock fund. The two reference funds are Sampo Global Balanced (Sampo Globaali Yhdistelmä) and Mandatum Global, the first representing a balanced fund reference and the latter representing a pure stock fund reference. Both of the funds employ a worldwide investment strategy such as Sampo Sustainability Equity –fund.

5.2.3 The SRI Strategies in the Data Funds

The main underlying criteria under both of the SRI funds studied –Sampo Sustainability Bond and Sampo Sustainability Equity – is that they simply include in their portfolios securities of companies that belong to Dow Jones Sustainability World ex All –Index (Sampo [3], Sampo [5]). Moreover, both of the funds state that they exclude companies whose

main business is in the alcohol, tobacco, gambling, pornography or armaments industry. So basically at the first glance it seems that the funds rely solely on the traditional exclusion screens.

Luckily, as I see it, in reality the fund policy is not so straightforward. Because of the criteria that the included companies have to belong to DJ Sustainable index, also other SRI strategies are embedded: In order to get into the DJ Sustainable index, the company has to pass the best in class criteria identifying global sustainability leaders on the basis of economic, environmental and social criteria. The methodology how the companies are selected is very penetrating and covers a great amount of criteria from the quality of the customer feedback process to the eco-efficiency measures and equal remuneration of the employees (Dow Jones Indexes, 2004, p. 8-16).

5.3 Description of methodology

To conduct the study the hypotheses announced above are transformed to working hypotheses that can be examined with statistical tests. To begin with, the tests are conducted to reference investors and ethical investors as a whole. Secondly, to deepen the picture, differences between the ethical investors and reference investors are studied in the groups of fixed income and equity funds.

The working hypotheses under hypothesis 2 are:
2a): "In the socially responsible mutual funds the percentage of women is higher than in the reference funds."
2b): "In Sampo Sustainability Bond –fund the percentage of women is higher than in the reference fund."
2c): " In Sampo Sustainability Equity –fund the percentage of women is higher than in the reference funds."
Correspondingly, the working hypotheses are composed under each main hypothesis 1, 3 and 4.

The gender distribution in hypothesis 2 is tested by giving to the gender a dummy variable: 0 = female and 1= male. Also the urbanization of the investors is tested by giving to different

town types a dummy variable. The distributions of dummy variables are tested with χ^2 - test. The test is formulated as following (see, for example Levine *et al.* 2003, p. 388-399):

Equation 5-1: χ^2 - Test

$$\chi^2 = \sum_{j=1}^{k}\sum_{i=1}^{h}\frac{(\underline{f}_{ij} - \underline{e}_{ij})^2}{\underline{e}_{ij}} \sim \chi^2(f) \qquad \text{, where}$$

$\underline{f}$	=	the actual frequency
$\underline{e}$	=	the theoretical frequency
f	=	the degree of freedom = (h-1)*(k-1).

On contrary to the gender and town type, other items in hypotheses 1, 3 and 4 are numerical variables and are thus tested in the means of the T-test. The formula for the two independent samples T-test is the following (see, for example Levine *et al.* 2003, p.321-335):

Equation 5-2: Two-Independent-Samples T-test

$$\underline{t} = \frac{(\bar{x}_1 - \bar{x}_2) - (\delta)}{\sqrt{\underline{s}_1^2/n_1 + \underline{s}_2^2/n_2}} \sim t(v) \qquad \text{, where}$$

$\bar{x}_1$	=	The mean of the sample taken from population 1
$\bar{x}_2$	=	The mean of the sample taken from population 2
δ	=	$\mu_1 - \mu_2$, μ_i = the mean of population i.
s_i^2	=	the variance of the sample taken from population i
n_i	=	the size of the sample taken from population i
v	=	The degree of freedom, and
1/v	=	$c^2/(n_1-1) + (1-c)^2/(n_2-1)$, and
c	=	$(s_1^2/n_1) / (s_1^2/n_1 + s_2^2/n_2)$.

5.4 Limitations of the study

The study is based on data from investors who have actually invested in social responsible mutual funds – not from persons who only show interest in social issues. Moreover, the study focuses on the demographics of the investors rather than socio-economical issues and interests that could be found out with a questionnaire study. Thus, the questions about investor's education, occupation, income and personal preferences are outside the scope of this study.

Moreover, the study is not an investigation straight from the population; on the contrary it is conducted with a sample from the investor population. As the sample is not a random sample, the doubt whether the sample matches well enough to the population exists. However, as Sampo Bank is one of the largest mutual fund providers in the private investor sector and the sample is large consisting of thousands of investors, it is assumed that the sample match is adequate.

6 THE STUDY

6.1 The Characteristics of the Reference Mutual Fund Investors

The investors representing 'normal' or reference mutual fund owners are the investors of Sampo Bond, Mandatum Global and Sampo Global Balanced. Sampo Global Balanced has succeeded to attain the highest amount of investors (9425) whereas Sampo Bond has succeeded in the corporate side and thus has the highest market value (around 70 million euros). The basic characters – the amount of investors and invested amounts divided into private and corporate sectors – are presented in Table 6-1.

Table 6-1: The number of Investors and Market Value of the Reference Funds

	Mandatum Global	%	Sampo Global Balanced	%	Sampo Bond	%
No. Investors, Private	1639	96 %	9220	98 %	2420	97 %
No. Investors,Corporate	60	4 %	205	2 %	71	3 %
No. Investors, Total	1699	100%	9425	100%	2491	100%
Size, Private	6 382 501 €	33 %	32 864 240 €	66 %	20 523 808 €	30 %
Size, Corporate	13 197 968 €	67 %	17 021 789 €	34 %	48 923 462 €	70 %
Size, Total	19 580 469 €	100%	49 886 029 €	100%	69 447 269 €	100%

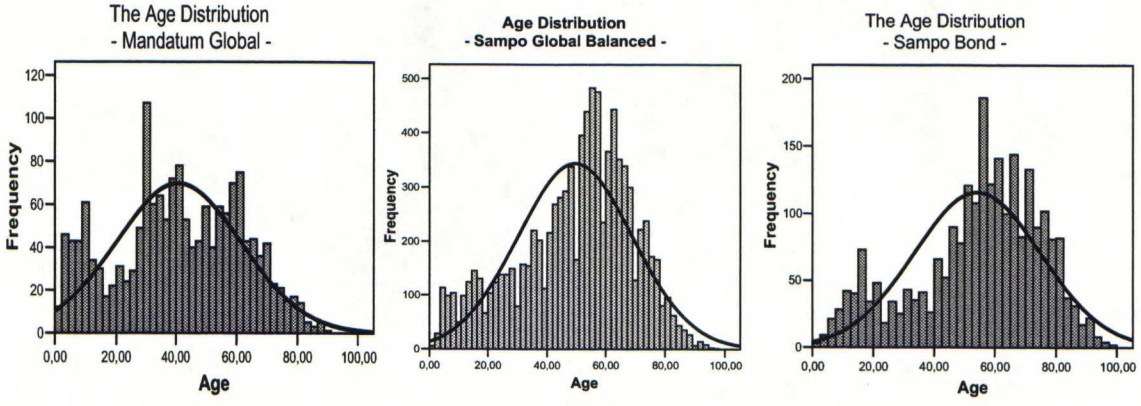
This study concentrates on the demographics of the domestic, private investors, and the corporate owners as well as foreign private owners of the funds are left outside the study. Thus, from now own the figures presented rely solely on the private side in both size and different type of investors. As it can be seen from Table 6-1, the corporate owners constitute only a couple percentages of the investors but remarkably higher part from the money invested. Thus, if corporate investors would be studied together with private investors, they would bias the results because of exceptional high ownerships. Moreover, companies cannot be included in the studies that focus on hypothesis 1 and 2 – the gender and the age of the investors. Additionally, the postal codes of foreign investors would make no sense in the residence analyses. Of the 13 279 private investors in total, 129 are foreigners and 13 150 are registered with domestic domicile.

How one can then describe a typical private investor? The tables 6.2 - 6.6 below represent the structures of the age, gender, postal code and owned amount of the investors in each of the funds. Figures 6.1.- 6.9. represent the frequencies in graphical form and compares the distributions to normal distribution.

Table 6-2: The Statistics of the Age Distribution in the Reference Funds

	Mandatum Global	Sampo Global Balanced	Sampo Bond
Mean	41	49	54
Median	41	53	57
St. Dev.	21	19	21
Skewness	-0,08	-0,5	-0,6
Percentiles:			
Limit of lowest 25%	27	37	43
Limit of 50%	41	53	57
Limit of 75%	58	63	70

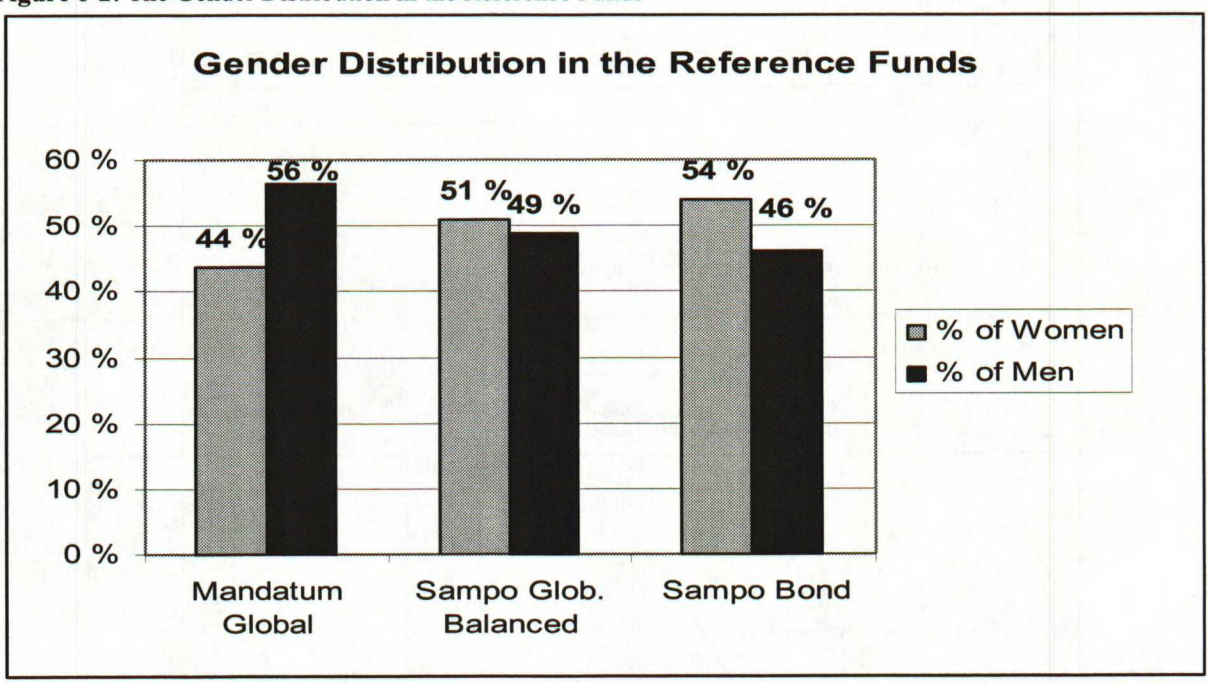
Figure 6-1: The Age Distributions of the Reference Investors



In each of the fund the average and median ages are between 40 and 57 years. Mandatum Global seems to have the youngest age structure with both mean and median of 41 years. In every fund the skewness is below 0 indicating higher amount of young investors than would be expected by the normal distribution. Also the whole age distribution reflects the amount of savings that people may be expected to have in each phase of their life-cycle: The underage seem to have savings saved by their parents and grandparents, and then the savings are more or less consumed in the twenties and thirties when buying a house and having children. Again, after forties the amount of investors increases substantially.

The gender distribution is quite similar in all the three funds. The most distinguishing feature is that whereas in Mandatum Global the proportion of men is higher, in the two other funds the distribution is in the other way around. However, the proportions of both sexes remain between 40 and 60 percent in all of the funds. The gender distributions are represented in figure 6-2.

Figure 6-2: The Gender Distribution in the Reference Funds

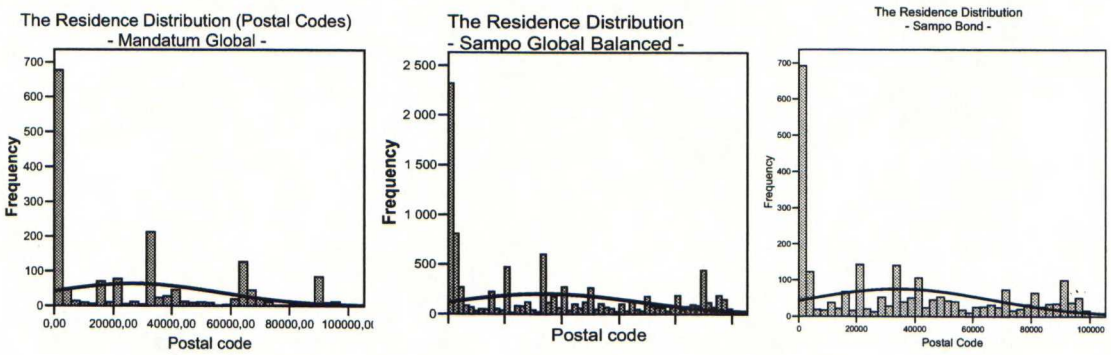


The residence distribution of the investors emphasizes expectedly small postal codes, which indicates the greater weight of the capital area. In addition to the remarkable peak of postal codes of Helsinki, Vantaa and Espoo (codes 00002-02999) there are a couple of peaks indicating the investors of other cities: Turku (codes 20002-20960), Tampere (codes 33000-33999) and Oulu (codes 90100-91999). In general, Mandatum Global seems to have the southernmost and Sampo Bond the northernmost residence distribution. The key statistics of the postal codes are represented in Table 6-3 and the figures versus normal distribution in Figure 6-3.

Table 6-3: The Statistics of the Residence Distribution in the Reference Funds (The Distribution of Postal Codes)

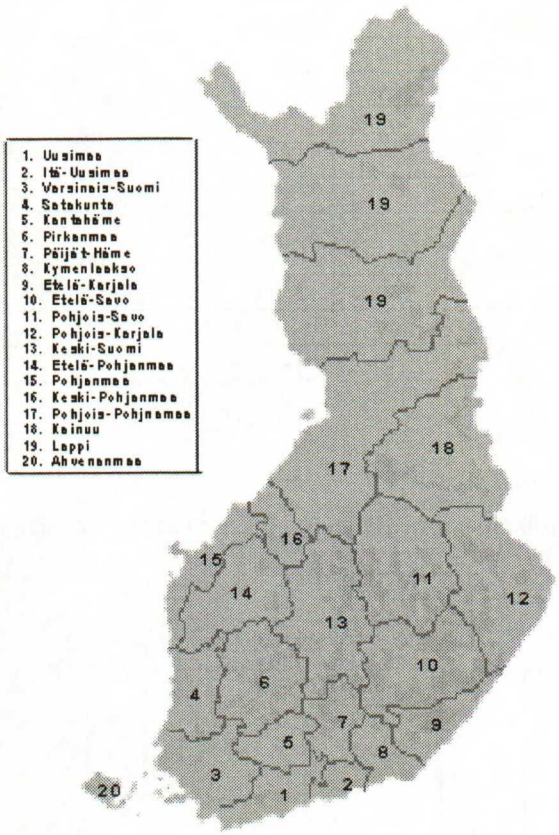
	Mandatum Global	Sampo Global Balanced	Sampo Bond
Mean	26722	33832	34234
Median	15900	26660	29220
St. Dev.	29264	33013	32106
Percentiles:			
Limit of lowest 25%	00950	01800	02110
Limit of 50%	15900	26660	29220
Limit of 75%	40740	60100	60142

Figure 6-3: The Residence Distribution in the Reference Funds (The Distribution of Postal Codes)



In the figure above the high weight of capital region is quite predictable because of the high residence concentration of the area. Therefore, perhaps a more informative picture is given in Figure 6-5 which shows the residence of the investors as a percentage of the inhabitants. The residence distribution of the Figure 6-5 is based on the provinces ('maakunta') rather than to the postal codes. The provinces of Finland are presented in a graphical form in Figure 6-4.

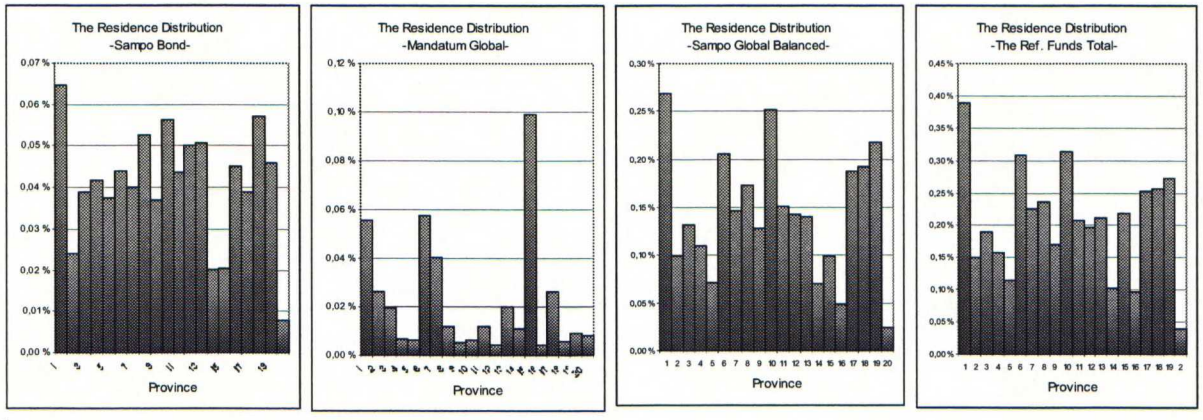
Figure 6-4: The Provinces of Finland



In Figure 6-5 and the residence distribution is represented individually for each reference fund and in addition to the reference investors in total. The total distribution is a weighted average of individual distributions so that each investor has the same weight. Thus the Sampo Global balanced represents 70% of the distribution, Sampo Bond 18% and Mandatum Global 12% (the amount of private domestic investors with identifiable postal code 9132 / 2400 / 1618 in each of the funds). In all the distributions the capital region still stands out, but not so substantially than in the absolute figures above. The Tampere –region (province 6, Pirkanmaa) is well-presented in all the funds as well as Mikkeli –region (province 10, Etelä-Savo) in funds Sampo Bond and Sampo Global Balanced. In Mandatum Global Vaasa –region (province 15, Pohjanmaa) stands out with the highest proportional residence in the fund. According to Sales Manager Pekka Karppi from Sampo Fund Management Ltd. Mandatum had a strong market coverage in the Swedish-speaking Pohjanmaa -region before it merged to Sampo Group. Therefore also nowadays the Mandatum funds that are established already before the merge thrive in the area. In addition

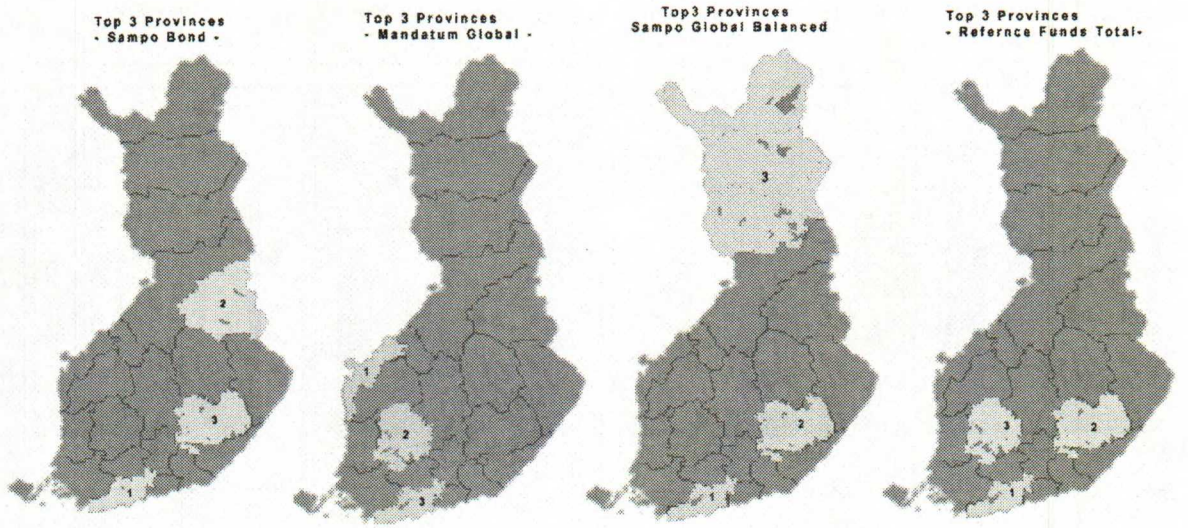
Karppi states that compared to Mandatum funds the customer base of Sampo funds is spread more evenly over whole Finland. This can also be seen in the Figure 6-5.

Figure 6-5: The Residence of the Reference Investors as a Percentage of the Population



The top three provinces compared to the population of the area vary between different reference funds. The Figure 6-6 summarizes the top three provinces. The capital region, Uusimaa, is the only province that is in the top three in all the funds. As stated above, Pohjanmaa is the most covered area in Madatum Global and Pirkanmaa takes the second place. In Sampo Bond and Sampo Global Balanced the northern areas of Finland enjoy a substantially high coverage: in Sampo Bond the Kainuu area is the second and in Sampo Global Balanced Lappi the third covered area. In both of the funds Etelä-Savo is also in the top three. In total in the reference funds the Uusimaa area is still number one followed by Pirkanmaa and Etelä-Savo areas.

Figure 6-6: The Residence of the Reference Investors as a Percentage of the Population: Top 3 Provinces

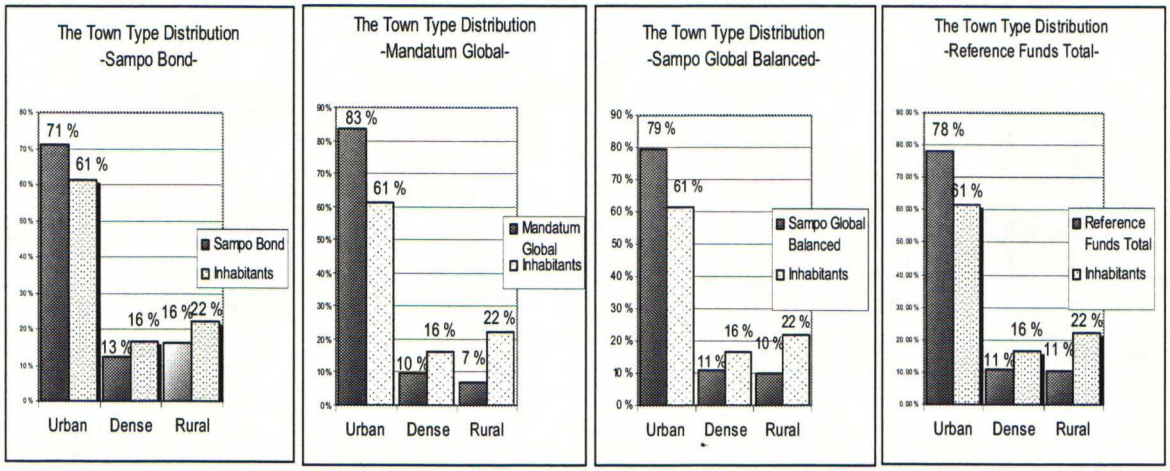


Another way to describe the residence distribution in addition to the division between different postal codes and provinces is the segmentation to different town-types. In this study municipalities are divided into three different types:

1. Urban settlements zones
2. Dense settlement zones
3. Rural settlement zones.

The division is based on the figures of Central Statistical Office of Finland designed to depict the rate of the urbanization in municipalities. The division is based on the population density rather than to administrative grounds and thus describes the real nature of areas better than the institutional division to towns and other municipalities. (source: SuomiCD, Central Statistical Office of Finland, population 1st January, 2000). As the Figure 6-7 shows, the investors are concentrated to the urban areas: the urban proportion of the investors is over 70% in all of the funds. As the urban group of the inhabitants is 61%, in all the funds the rate of the investors' urbanization is higher than the average urbanization rate of inhabitants.

Figure 6-7: The Town Type Distribution in the Reference Funds: Urban, Dense and Rural

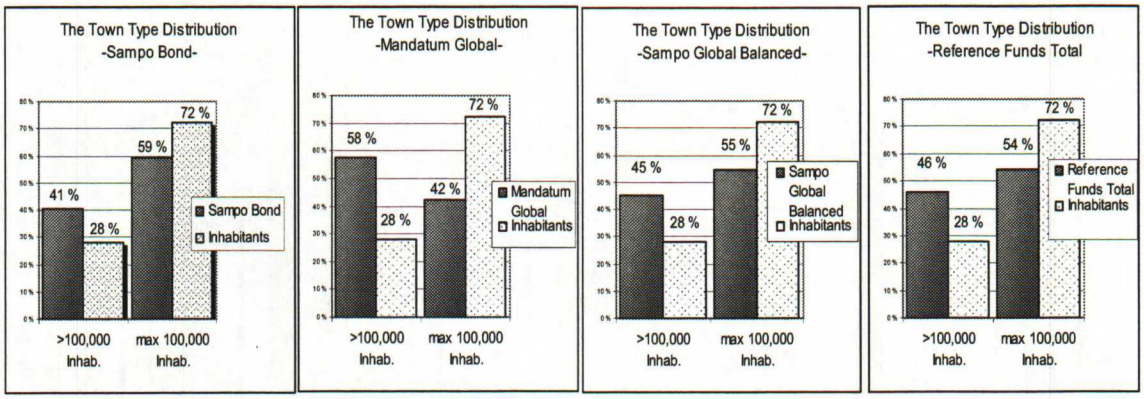


To make the town type division even more clear, the municipalities are divided into towns over and under 100,000 inhabitants. In Finland there are only 6 towns that exceed the limit and together these six towns compose approximately 28% of the population. According to 2001 population census the towns and the number of their inhabitants are:

1. Helsinki, 536,958 inhabitants
2. Espoo, 218,083 inhabitants
3. Tampere, 191,677 inhabitants
4. Vantaa, 175,245 inhabitants
5. Turku, 169,735 inhabitants
6. Oulu, 128,073 inhabitants.

As Figure 6-8 shows, the concentration of investors to large towns is even clearer than in the Figure 6-7 the concentration to urban areas. The most outstanding case is Mandatum Global: while the majority of the inhabitants (72%) residence outside the biggest towns, 58% of Mandatum Global's investors inhabit in them. Also in the most moderate case, Sampo Bond, the difference to the general population is 13 percentage units. In total in reference funds the difference to general inhabitants is 18 percentage units (46% vs. 28%).

Figure 6-8: The Town Type Distribution in the Reference Funds: Towns over and under 100,000 Inhabitants

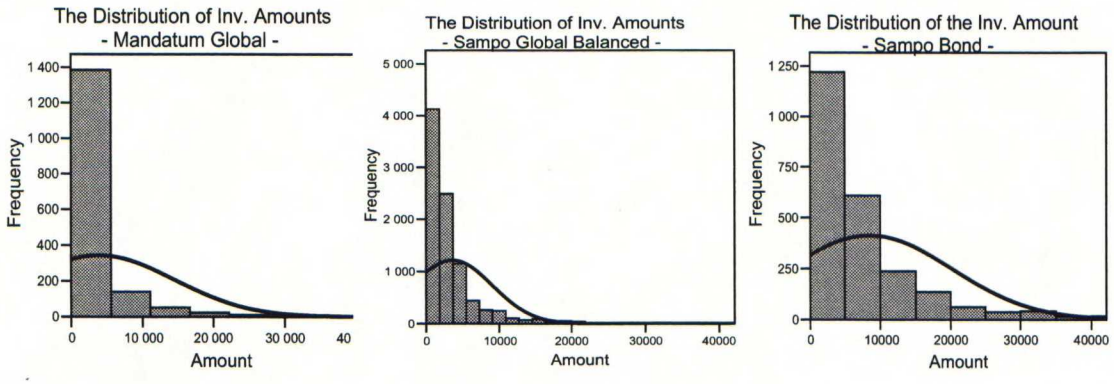


The invested amounts are highly concentrated on small amounts. The lowest average is in Sampo Global Balanced (3564 €) whereas Sampo Bond has the highest one (8480 €). The Table 6-4 and Figure 6-9 indicate the statistics and distribution of the invested amounts. From the Figure 6-9 can be seen that Sampo Bond is also the only fund to which the private owners have invested visibly amounts over 20,000€. The quite high positive skewness figures in Table 6-4 indicate the long right tails of the distributions and reflect exceptional high investments compared to the general mass of the investors.

Table 6-4: The Statistics of the Invested Amount in the Reference Funds

	Mandatum Global	**Sampo Global Balanced**	**Sampo Bond**
Mean	3894	3564	8480
Median	1327	2007	4955
St. Dev.	10575	5495	11681
Skewness	10,34	6,64	4,83
Min	1,15	0	0
Max	204075	104827	99800
Percentiles:			
Limit of lowest 25%	552	984	2246
Limit of 50%	1327	2007	4955
Limit of 75%	3478	4094	9837

Figure 6-9: The Distribution of the Invested Amount in the Reference Funds



To conclude the characters of the reference investor, all the domestic private investors of the reference funds are collected to one 'reference investor' data. The key figures of this data are presented in Table 6-5. As the table shows, the variety of investors is large: the data contains investors from 0 to 98 years living in the area from Helsinki (postal code 00075) to Utsjoki (postal code 99981) and invested amounts between 0 and 204075€. In the Sex –column the gender of the investor is presented in a dummy-variable form: variable 0 represents a female and variable 1 represents a male. Thus, the average and median figures can be directly interpreted as a percentage: for example, the average sex figure 0,495 designates that 49,5% of the investors are male. Correspondingly, the median 0,00 destines that the median investor is a female.

Table 6-5: Characteristics of an Average Reference Investor

	Age	***Sex*** *(0=female,1=male)*	***Postal code***	***Amount***
Mean	49	0,495	33281	4482
Median	53	0,00	26660	2197
Standard Deviation	20	0,50	32488	7802
Minimum	0	0,00	100	0,00
Maximum	98	1,00	99981	204075
Count (amount of observations)	13150	13150	13150	13150

According to the table the average reference investor is:

- a female (50,5% vs. 49,5% male)
- 49 years old
- lives in Southern Finland – more specifically in Tampere -area[14] according to average and in Rauma when using the median as the mean figure.
- has invested 4482€ in the fund.

6.2 The Characteristics of the Reference Investors vs. the Finnish Shareholders

To get a picture of the validity of the reference investor data the characters of the reference investors are compared to the characteristics of Finnish shareholders. The comparison is made to the situation at 1st June 2000 and utilizes the findings of the study of Karhunen and Keloharju (2001). The findings of Karhunen an Keloharju are based on a database consisting of all electronically registered shareholdings of Finnish stocks and cover more than 99,99% of the total market capitalization of Finnish stocks.

According to the study of Karhunen and Keloharju the average age of the investor population is considerably higher than the age of the general population: The mean age of the investors is 49,0 years whereas the mean age of the population is 39,2 years. As perceived above, the average age of the reference fund investors is 49,35 which is very close the average age of the shareholders. Also the average ages in the gender level follow the same pattern as the age of the shareholders: male investors seem to in general younger than the female investors. The average age of male shareholder investors is 47,9 years and female investors 50,2 years while the corresponding numbers of the reference mutual funds are 47,7 and 51,0 years. Thus, the age distribution of the reference group of the study seems to fit well to the age distribution of shareholders.

Karhunen and Keloharju also found that the investor population is biased towards male gender: while the general population is slightly female dominated (51,2% vs. 48,8%), among the shareholders males are the domineering gender (54,1% vs. 45,9%). The reference group

[14] The average postal code 33281 is in the postal code range of Tampere –area.

of this study places itself in the middle of these two groups with the gender distribution of 50,5% females and 49,5% males. The reason for this finding may lie in the *model of investor overconfidence*. The overconfidence means that people are more confident than correct - in other words they believe that they are right when they are wrong. Furthermore, the theory suggests that the overconfident people value too high their private information or they may misinterpret the public information.

The overconfidence model of Odean (1998b) argues that more confident investors hold riskier portfolios and trade too much thus hurting their performance. Moreover, international studies show that men are more overconfident than women (see, for example Barber and Odean, 2001; Gervais and Odean 2001). Similar findings have also been fund in Finnish studies: Tyynelä and Perttunen (2003) and Westerholm and Kuuskoski (2003) found evidence that Finnish males seem to be more overconfident than women in the terms of trading activity. However, they did not find evidence that men would own riskier portfolios than women, at least not when only straight stock investments were under the study. Thus, the general assumption that women are more risk avert than men did not find support in these two Finnish studies.

Despite of this shortcoming I argue that the theory of overconfidence and these findings can be utilized to explain the difference between the gender distribution of shareholders and the reference fund investors: According to studies referred above men are more overconfident than women. As overconfident investors (which are predominantly men) value higher their private information, it is understandable that they want to invest their money straight themselves. On the contrary, women as a less overconfident gender prefer to invest their money through mutual funds. Consequently, the straight stock investors are more male biased than the mutual funds investors compared to general population.

According to findings of Karhunen and Keloharju the general shareholders residence predominantly in the south: 46,6% of the investors residence in the Uusimaa province while the corresponding figure of the general population is 26,6%. The findings from the reference funds of this study indicate the residence of 37,8% in that area. Even though the difference to the general population is not as immense as in the general shareholder population the direction is the same. Moreover, when comparing the number of individual investors as a

percentage of the population of the area, in both studies Uusimaa and Pirkanmaa are in top three. The key difference here is that while in Karhunen and Keloharju study in Ahvenanmaa the investor coverage is the highest one (33,5% of the population in that area), in the reference funds Ahvananmaa stays far from the top provinces. However, this difference can be explained by the fact that as Ahvenanmaa is a specific area, Sampo and Mandatum Bank do not have high market penetration in Ahvenanmaa. Thus the mutual fund investors of Ahvenanmaa have used predominantly other mutual fund providers, for example Ålandsbanken which has the highest market penetration in Ahvenanmaa (Ålandsbanken, Annual Report 2003).

The division of the investors between urban and rural residence gives also same kind of results than in the study of Karhunen and Keloharju[15]. As showed above in Figure 6-7 the residence of the investors is biased to urban areas: whereas the urban population is 62% of the overall population the reference investors of urban areas constitute 78% of the reference investor population. The figures of Karhunen and Keloharju state the urban percentage of 75,5% among stock investors.

The invested amounts of the reference funds are not straightly comparable to the ones of straight stock investors. The reason is that while the reference mutual fund data describes the amount of investment to *one* specific mutual fund, the Karhunen-Keloharju data indicates a persons' straight stock investments *in total*. Despite this fact in can be mentioned that the average stock portfolio of an investor in Karhunen-Keloharju study is worth 37 640€ which is much more than the average reference fund investment 4483€. Moreover, the worth of those portfolios of the shareholders which consist of only one stock are in average worth 7165€, which is still much higher than the average of the reference mutual fund investment.

To summarize, the characteristics of the reference group of this study follow closely the characteristics of shareholders in all the other features except the invested amount. As stated in section 5.2, the assumption was not that the characteristics should be totally identical because the first should describe the mutual fund investor population while the latter is the

[15] The division to urban and rural investors in Karhunen-Keloharju study is not totally unique to the division of this study. While this study divides the investors to urban, dense and rural areas Karhunen-Keloharju uses the division to urban and rural areas. However, the division of the areas is quite comparable: while in this study 62% of the general population lives in the urban area, in the Karhunen-Keloharju the corresponding figure is 66%.

straight stock investor population. The Table 6-6 summarizes the key features of the two groups. In the table the invested amount in the shareholders column is the average of those investment portfolios which include only one stock.

Table 6-6: Mean Characters of the Reference Investors vs. Finnish Shareholders

	Age	Gender: Female/Male	% of Investors in Uusimaa	Inv. Amount: (one stock/fund)
Reference Investors	49,4	50,5% / 49,5%	37,8%	4 483 €
Shareholders	49,0	45,9% / 54,1%	46,6%	7 165 €

6.3 The Characteristics of Socially Responsible Investors

The investors representing socially responsible investors are the investors of Sampo Sustainability Bond and Sampo Sustainability Equity. Both of the funds are quite small when comparing the number of investors - especially Sampo Sustainability Bond which has only 99 owners in total. Moreover, the fund has only 87 private owners that have invested only about 133,000€ in total. Of the 1 381 private investors in total, 1 372 are registered with domestic domicile and 9 are foreigners and thus left outside of this study. In terms of the amount invested both of the funds end up again to the last place when comparing to the reference funds: ethical funds have a market value slightly above € 13 million while the size of the reference funds is €19-69,5 million. The basic characters of the socially responsible funds are presented in Table 6-7.

Table 6-7: The Number of Investors and Market Value of the Socially Responsible Funds

	Sampo Sust. Equity	**%**	**Sampo Sust. Bond**	**%**
No. Investors, Private	1294	95 %	87	88 %
No. Investors, Corporate	64	5 %	12	12 %
No. Investors, Total	1358	100 %	99	100 %
Size (Amount), Private	3 908 227 €	29 %	132 660 €	1 %
Size, Corporate	9 376 951 €	71 %	13 393 449 €	99 %
Size, Total	13 285 178 €	100 %	13 526 109 €	100 %

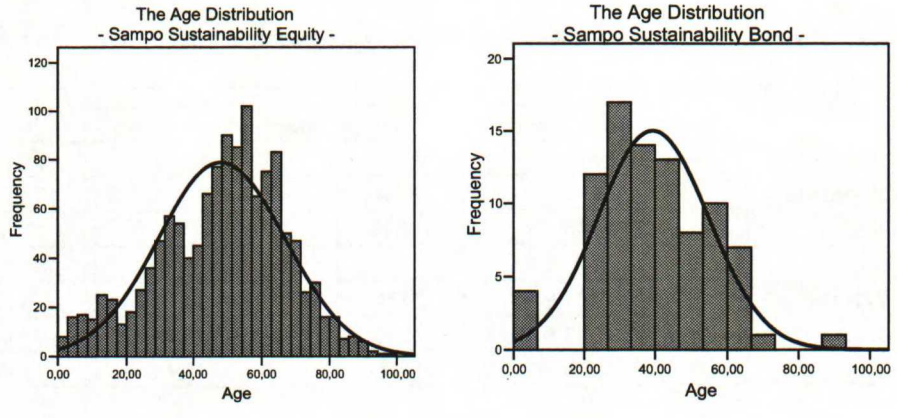
The age distribution follows quite closely the normal distribution in both of the funds as Figure 6-10 shows. The most outstanding difference compared to the reference funds is that the figures don't show as strong evidence of the slower savings generation in the age 20-35. Moreover, Sampo Sustainability Bond hasn't any investors in the age group 8-17 years.

When comparing the two ethical funds with each other, the bond fund seems to have a much younger investor population than the stock fund: the average age in the bond fund is almost 10 years younger and the median even more. The basic statistics of the age distributions are presented in Table 6-8.

Table 6-8: The Statistics of the Age Distribution in the SRI Funds

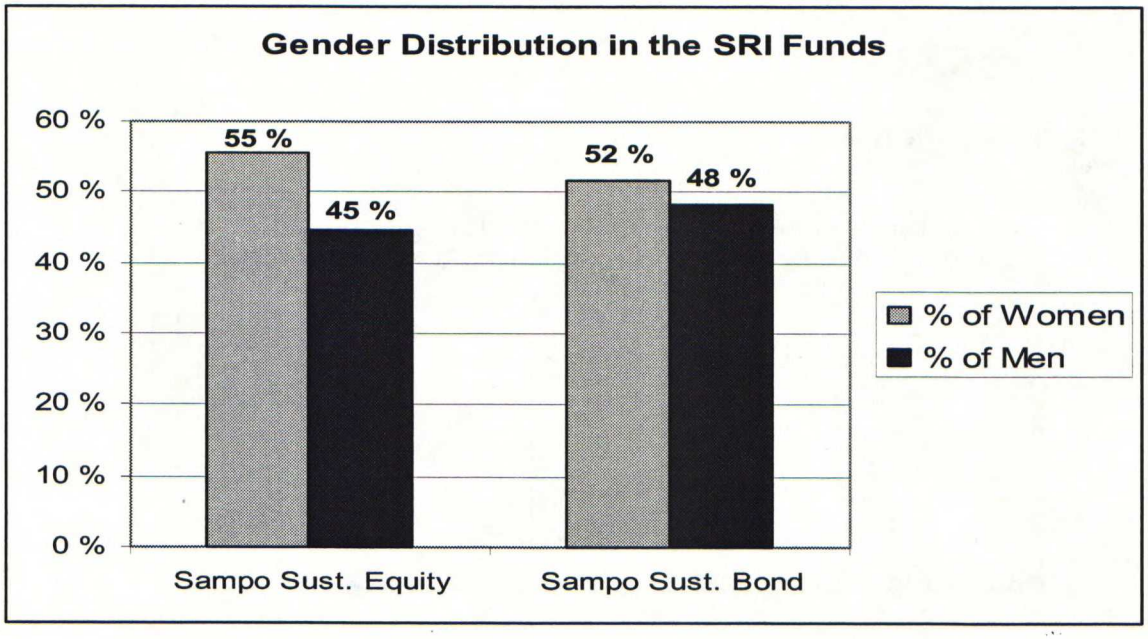
	Sampo Sust. Equity	**Sampo Sust. Bond**
Mean	48	39
Median	50	38
St. Dev.	19	15
Skewness	-0,36	0,13
Percentiles:		
Limit of lowest 25%	36	28
Limit of 50%	50	38
Limit of 75%	61	52

Figure 6-10: The Age Distributions of the SRI Funds



The gender distribution in the SRI funds follows a similar pattern than in the reference funds: the proportion of both sexes remain between 40% and 60%. Moreover, women are the majority as also in Sampo Global Balanced and Sampo Bond. The gender distribution is presented in Figure 6-11.

Figure 6-11: The Gender Distribution in the SRI Funds



The residence distribution of the SRI funds has a large peak in small postal codes. Thus, the distribution follows same kind of pattern as the distributions in the reference funds. Also the three peaks of Turku, Tampere and Oulu can clearly be seen in the postal code distribution of the Sampo Sustainability Equity in Figure 6-12. The peak of the capital area codes seems to be especially high in the Sampo Sustainability Bond. Also the average postal codes of the bond fund are really low (see Table 6-9).

Table 6-9: The Statistics of the Residence Distribution in the SRI Funds

	Sampo Sust. Equity	Sampo Sust. Bond
Mean	30903	17127
Median	20460	02230
St. Dev.	32667	26059
Percentiles:		
Limit of lowest 25%	01390	00570
Limit of 50%	20460	02230
Limit of 75%	52340	33230

Figure 6-12: The Residence Distribution in the SRI Funds

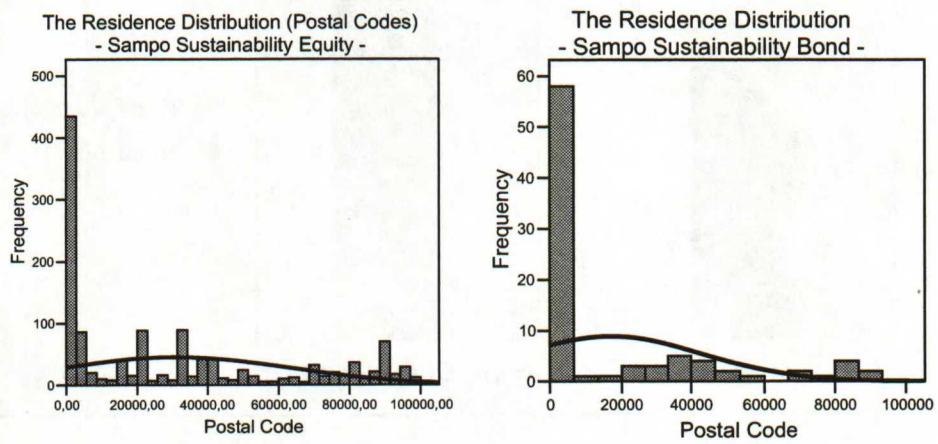


Figure 6-13 which shows the residence of the investors as a percentage of the inhabitants. The residence distribution of the Figure 6-13 is based on the provinces ('maakunta') presented in Figure 6-4. In Figure 6-13 the residence distribution is represented individually for both SRI funds and in addition to the socially responsible investors in total. The total distribution is a weighted average of individual distributions so that each investor has the same weight. Since Sampo Sustainability Bond has succeeded to attain only a small amount of investors, Sampo Sustainability Equity represents the vast majority of the SRI Total – distribution, 94% (the amount of domestic private investors in equity fund 1285 and 87 in the bond fund). Because of the small amount of investors in the bond fund provinces 4, 5, 11, 14, 15, 19 and 20 are left without investors in the distribution. In all the distributions the capital region still stands out, as was the case in the reference group. However, leading position of the capital region can be distinguished even better among the SRI group than in

the reference group: the proportional amount of investors in Uusimaa (province 1) is in the SRI group 2,4 times the average amount while in the reference group it is only 1,9 (see Table 6-10.). This outcome strengthens the confidence to the Hypothesis 3 that the socially responsible investors inhabit farther to the south and are more urbanized than the reference investors.

Figure 6-13: The Residence of the Ethical Investors as a Percentage of the Population

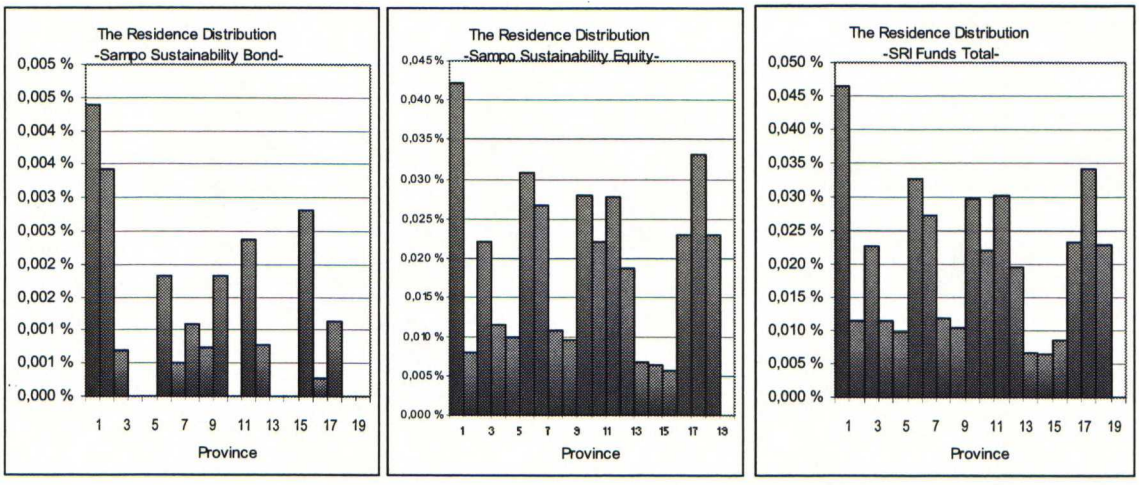
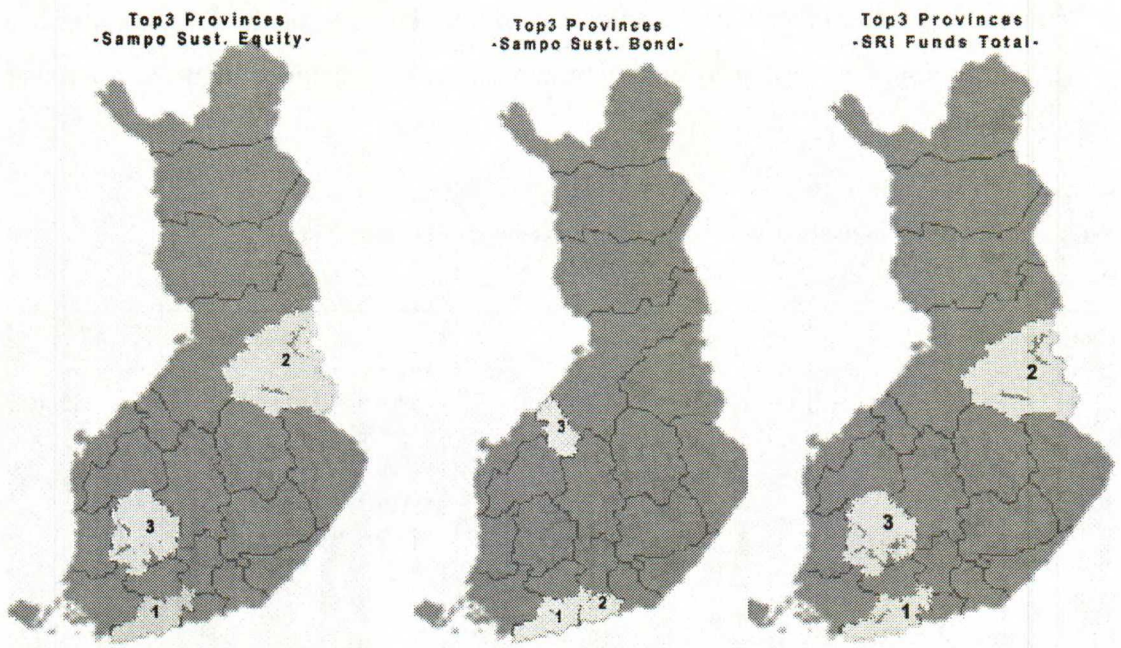


Table 6-10: The Residence of the Investors as a percentage of inhabitants in Uusimaa and in Average

	SRI Funds			Reference Funds			
	Bond Fund	Equity Fund	**Total**	Bond Fund	Equity Fund	Balanced Fund	**Total**
Uusimaa	0,004 %	0,042 %	0,046 %	0,065 %	0,056 %	0,268 %	0,388 %
Average	0,001 %	0,018 %	0,019 %	0,041 %	0,022 %	0,143 %	0,206 %
Uusimaa / Average	4,0	2,3	**2,4**	1,6	2,6	1,9	**1,9**

The top three provinces compared to the population of the area vary between the two SRI funds. The Figure 6-14 summarizes the top three provinces. The capital region, Uusimaa, is the most covered area in both of the funds. In the equity fund Pirkanmaa and Kainuu follow the Uusimaa, whereas in the bond fund Itä-Uusimaa and Keski-Pohjanmaa are the second and third covered areas. Because of the bigger size of the equity funds, in SRI funds in total Pirkanmaa and Kainuu take the second and third place.

Figure 6-14: The Residence of the Ethical Investors as a Percentage of the Population: Top 3 Provinces



As in the section describing the reference funds, the Figure 6-15 and Figure 6-16 show the division of ethical investors between different town types. The figures indicate that also in the SRI funds the investors are concentrated to urban areas compared to the general inhabitants: The urban proportion of the investors is over 70% in both funds whereas the urban proportion of the inhabitants is 61%. In Sampo Sustainability Bond the difference is very clear: 93% of the fund's investors live in an urban area. As Figure 6-16 demonstrates the ethical investors are concentrated also to largest towns more than the inhabitants on average: 48% of the bond fund investors and 67% of the equity fund investors residence one of the six largest towns while only 28% of the inhabitants live there. Moreover, in comparison to the reference group presented in Figure 6-8 the distribution gives some support to the hypotheses 3: the proportion of urban populace is higher among the SRI funds than in the reference group (79% live in urban areas and 49% in the largest towns in the SRI funds while the corresponding figures of the reference group are 78% and 46%).

Figure 6-15: The Town Type Distribution in the SRI Funds: Urban, Dense and Rural

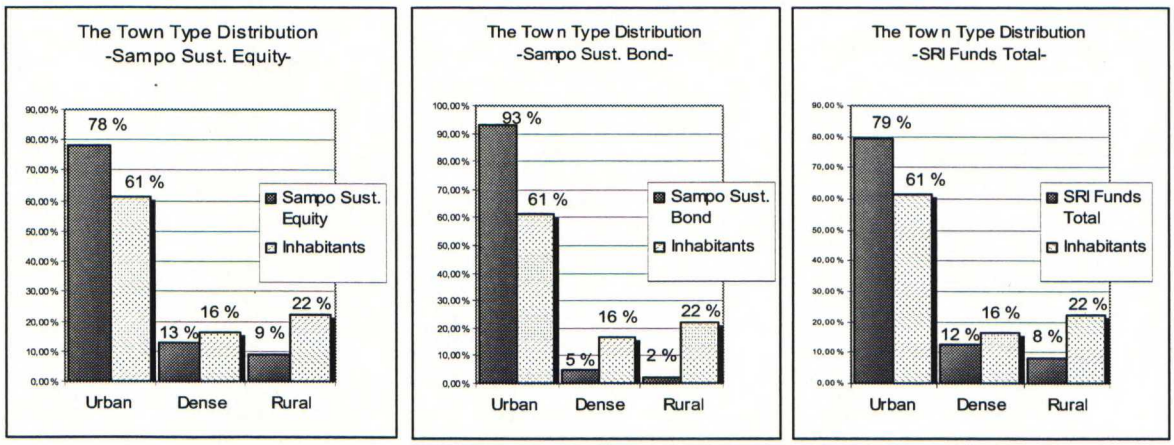
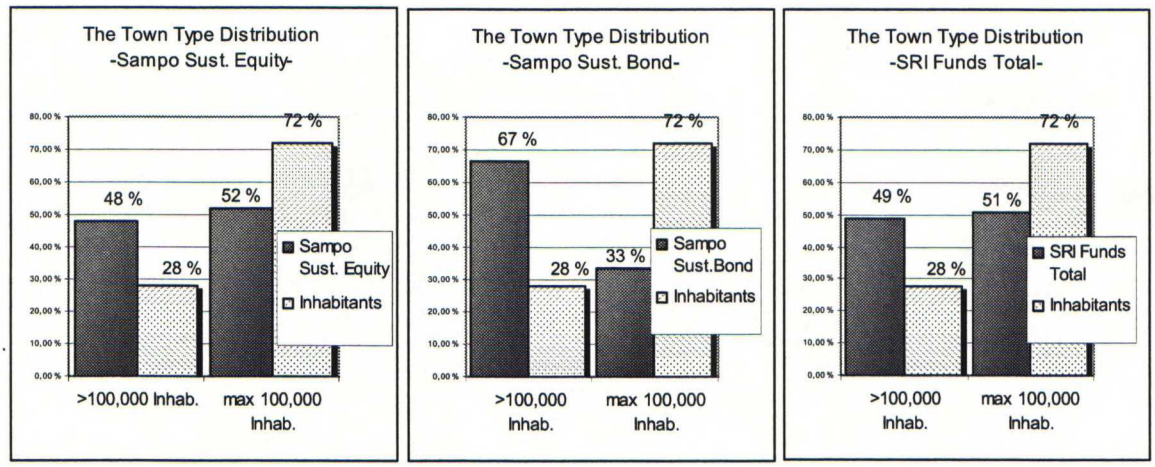


Figure 6-16: The Town Type Distribution in the SRI Funds: Towns over and under 100,000 Inhabitants



The invested amounts in the SRI funds are highly concentrated on small amounts as it was in the reference funds as well. The Table 6-11 and Figure 6-17 show the key figures and the shape of the distribution of the invested amount. Table 7.8 reports that in the bond fund the mean figures are extremely low, especially the median (106 €). Furthermore, the average (1524€) is higher than the 75% percentile[16] indicating that the ownership structure contains some exceptionally high ownerships compared to the general ownership base. When looking at the raw data it can be observed that the data contains two exceptionally high holdings

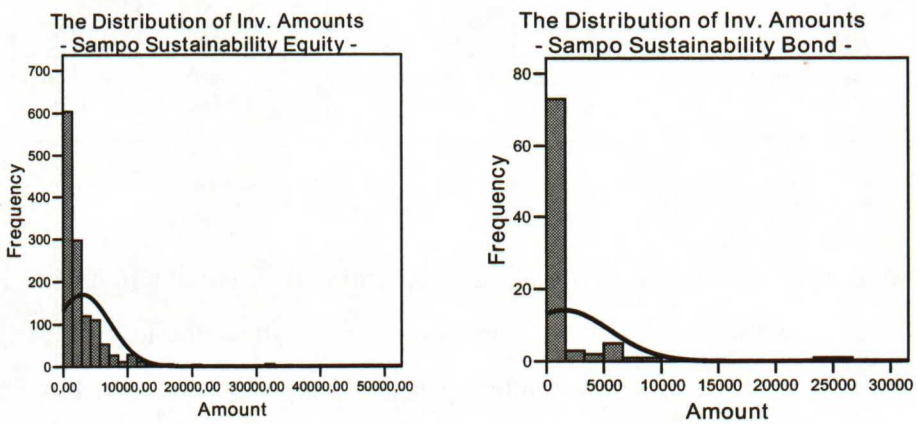
[16] The point where 75% of the investors own an amount less than the percentile amount.

above 20000€. The elimination of those exceptional observations would decrease the average to 972€ which fits between the 50% percentile (= median) and 75% percentile. However, despite the uncommonness of these findings these observations are not excluded from the data since they represent true ownership amounts.

Table 6-11: The Statistics of the Invested Amount in the SRI Funds

	Sampo Sust. Equity	Sampo Sust. Bond
Average	3020	1524
Median	1660	106
St. Dev.	4327	4057
Skewness	4,48	4,8
Min	0,01	5,25
Max	45040	26146
Percentiles:		
Limit of Lowest 25%	956	32
Limit of 50%	1660	106
Limit of 75%	3442	1006

Figure 6-17: The Distribution of the Invested Amount in the SRI Funds



To conclude the characters of the socially responsible investor both the equity and bond fund investors are collected to one 'ethical investor' data. The key figures of this data are presented in Table 6-12. As the table shows, the variety of investors is again large: the data

contains investors with age between 1 - 99 years living in the area from Helsinki (postal code 00100) to Utsjoki (postal code 99980) and invested amounts between 0,01€ and 45040€. According to the table the average reference investor is:

- a female (55,5% vs. 44,5%)
- 48 years old
- lives in Southern Finland – more specifically in Forssa according to average and in Turku when using the median as the mean figure.
- has invested 2904€ in the fund.

Table 6-12: Characteristics of an Average Ethical Investor

	Age	***Sex*** *(0=female,1=male)*	***Postal code***	***Amount***
Mean	48	0,45	30164	2904
Median	50	0,00	20270	1505
Standard Deviation	19	0,50	32464	4287
Minimum	1	0,00	100	0,01
Maximum	99	1,00	99980	45040
Count	1372	1372	1372	1372

When comparing these figures to the ones received from the reference investor data, one can perceive that the differences between the average reference and ethical investor are to the 'right' direction, i.e. as the hypotheses (see paragraph 5.1) state. For example, the typical ethical investor is slightly younger with the average of 48 years and median 50 compared to the ages 49 and 53 in the reference case (see, table Table 6-5). The average ethical investor is also more likely to be a female (55,5% of the ethical investors vs. 50,5% of the reference investors), and is more likely to have invested a smaller amount to the ethical fund as the reference investor to the 'normal' reference fund. Moreover, the ethical investor seems to residence farther to the south than the reference investor. To give a clearer picture of the residence, the Figure 6-18 shows the average and median domiciles of the investors.

Figure 6-18: The Residence of the Average Ethical and the Reference Investor

6.4 The Socially Responsible Investors vs. the Reference Group

As observed above, the differences between the socially responsible investors and reference investors are apparent. However, it is not yet stated whether these differences are statistically significant. Thus, the purpose if this paragraph is to examine and report whether the differences pass the statistical tests described in paragraph 5.3. Each hypothesis is first examined in a level SRI versus references in total and after that in the fixed income/ stock funds level.

6.4.1.1 The Age of the Investors

The assumption in the hypotheses was that investors investing in socially responsible funds should be younger than their reference group. The working hypotheses studied are the following:

1a): "In the socially responsible mutual funds the average age of the investors is lower than in the reference funds."
1b): "In Sampo Sustainability Bond –fund the average age of the investors is lower than in the reference fund Sampo Bond."
1c): " In Sampo Sustainability Equity –fund the average age of the investors is lower than in the reference funds Mandatum Global and Sampo Global Balanced."

To get the idea if the working hypotheses can be accepted or not Figure 6-19 represents the distribution compared in the hypotheses 1a and Figure 6-20 the distributions compared in hypotheses 1b and 1c. Figure 6-19 shows that ethical investors dominate the younger age classes except the class of underage. In the age classes the from 56 years upwards the situation is the other way round. In the fund level, as Figure 6-20 shows, the situation is clearly according to the hypotheses 1b in the bond funds: Sampo Sustainability Bond has clearly younger age structure than Sampo Bond. However, the situation is mixed in the stock funds: while the hypothesis holds when comparing Sampo Sustainability Equity to the balanced fund, Mandatum Global has clearly younger age distribution than Sampo Sustainability Equity. Thus the under-hypothesis 1c is abandoned.

Figure 6-19: The Age of the Ethical Investors vs. the Reference Investors – Total

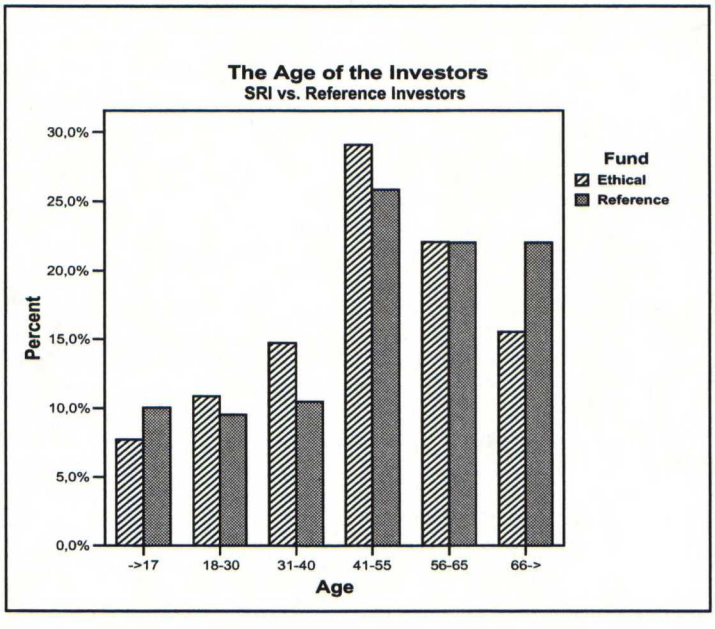
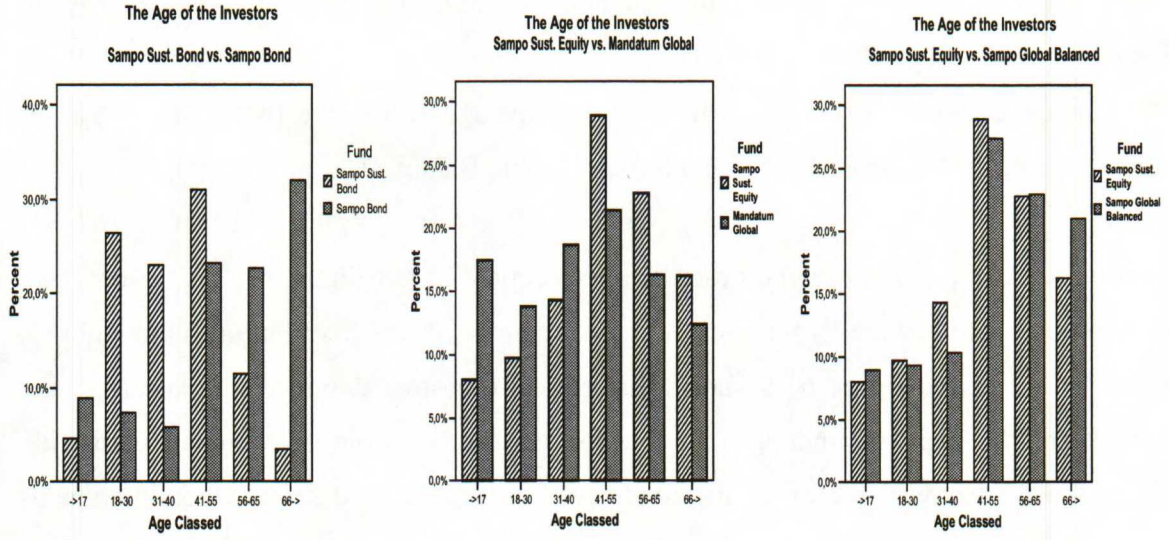


Figure 6-20: The Age of the Ethical Investors vs. the Reference Investors –Fund Level



As stated above, Mandatum Global has younger age structure than Sampo Sustainability Equity and thus the statistical tests of that fund pair are unnecessary. The statistical results of the other test are presented in Table 6-13. In total the ethical investors are proven to be younger with the confidential level of 0,01. The outcome is the same in the bond funds, where Sampo Sustainability Bond has younger age distribution with 0,001 confidence. In stock funds Sampo Sustainability Equity has younger age distribution than Sampo Global with 0,05 confidence level.

Table 6-13: The Statistical Significance of the Age Differences

	SRI Total	Ref. Total	Sust. Equity	Sust. Bond	Sampo Bond	Mandatum Global	Sampo Glob. Balanced
Average Age	47,69	49,35	48,18	39,40	54,19	40,73	49,58

	Mean Diff.	p-value	t-stat.
SRI Total / Reference Total	-1.66**	0,004	-3,100
Sampo Sust. Bond / Sampo Bond	-14.79***	0,000	-8,662
Sampo Sust. Equity / Sampo Glob. Balanced	7,44	-	-
Sampo Sust. Equity / Sampo Glob. Balanced	-1.4*	0,015	-2,508

* = Significance level 0,05 ** = Significance level 0,01 *** = Siginificance level 0,001

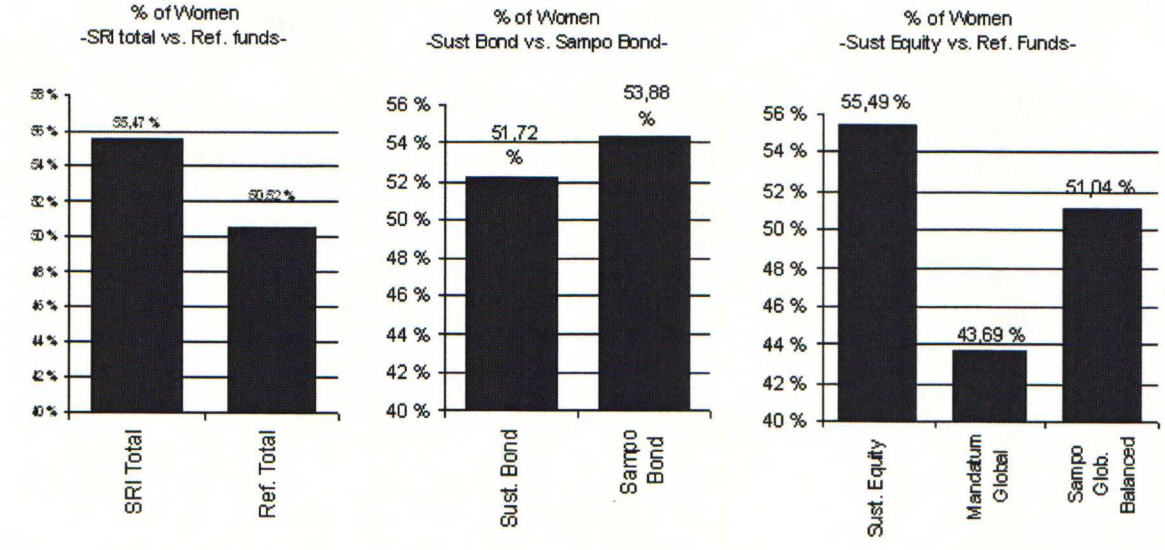
6.4.1.2 The Gender of the Investors

The assumption in the hypotheses 2 was that in the group of ethical investors the percentage of females should be higher than in the reference group. The working hypotheses studied under hypothesis 2 are the following:

2): "In the socially responsible mutual funds the percentage of females is higher than in the reference groups."
2b): "In Sampo Sustainability Bond –fund the percentage of females is higher than in the reference fund Sampo Bond."
2c): " In Sampo Sustainability Equity –fund the percentage of females is higher than in the reference funds Mandatum Global and Sampo Global Balanced."

To get the idea if the working hypotheses can be accepted or not Figure 6-21 represents the distribution compared in the hypotheses 2-2c. Figure 6-21 shows that among the ethical investors the percentage of women is higher than in the reference group. The case is similar in the equity fund group. However, in the bond funds the reference fund has a higher percentage of women than the ethical fund. Thus the under-hypotheses 2b is abandoned and no statistical tests are made in this fund pair.

Figure 6-21: The Gender of the Ethical Investors vs. the Reference Investors



To find out the statistical significance of the outcomes the gender data is analyzed with χ^2 -tests. The outcomes of the tests are presented in Table 6-14. The In total the ethical investors are proven to have a higher percentage of females (4,95% difference) than the reference group ($\chi^2(1) = 12{,}159$, $p = 0{,}000$) and the main hypothesis 2 can be accepted. Also in the stock funds the ethical stock fund has a statistically significant higher predominance of female investors. Thus the sub-hypothesis 2c is accepted in the 0,01 significance level. The sub-hypothesis 2b abandoned since the reference bond fund has 2,16% more women investors than the ethical bond fund.

Table 6-14: The Statistical Significance of the Gender Differences

	SRI Total	Ref. Total	Sust. Equity	Sust. Bond	Sampo Bond	Mandatum Global	Sampo Glob. Balanced
% of Women	55,47 %	50,52 %	55,49 %	51,72 %	53,88 %	43,69 %	51,04 %

	Mean Diff.	p-value	χ^2 - stats.
SRI Total / Reference Total	4,95%***	0,000	12,159
Sampo Sust. Bond / Sampo Bond	-2.16%	-	-
Sampo Sust. Equity / Mandatum Global	11.80%***	0,000	40,305
Sampo Sust. Equity / Sampo Glob. Balanced	4.45%**	0,003	8,980

* = Significance level 0,05 ** = Significance level 0,01 *** = Siginificance level 0,001

6.4.1.3 The Residence of the Investors

The residence hypothesis 3 was divided into two different hypothesis. The hypothesis 3B focused on the geographical division and stated that the socially responsible investors should live souther than the conventional investors. Hypothesis 3A concentrated on the urbanization and stated that the fraction of urban investors should be higher in the ethical funds than in the reference group.

Geographical Division

The assumption in the hypotheses 3A was that the socially responsible investors should have the southernmost geographical division compared to the reference group. To study the hypothesis the residence area is described by the postal code: the shouther the investor lives, the smaller the postal code[17]. The working hypotheses studied are the following:

3A): "In the socially responsible mutual funds the average postal code of the investors' domicile is lower than in the reference funds."
3A-b): "In Sampo Sustainability Bond –fund the average postal code of the investors' domicile is lower than in the reference fund Sampo Bond."
3A-c): " In Sampo Sustainability Equity –fund the average postal code of the investors' domicile is lower than in the reference funds Mandatum Global and Sampo Global Balanced."

To get the idea if the working hypotheses can be accepted or not Figure 6-22 represents the distribution compared in the hypotheses 3A and Figure 6-23 the distributions compared in hypotheses 3A-b and 3A-c. Figure 6-22 shows that in the small postal code classes the ethical investors clearly dominate while in the large postal codes the situation is vice versa. In the fund level, as Figure 6-23 shows, the situation is clearly according to the hypotheses 3A-b in the bond funds: Sampo Sustainability Bond has clearly souther investor structure than Sampo Bond. However, the situation is again mixed in the stock funds: while the hypotheses seems to by a narrow margin hold when comparing Sampo Sustainability Equity to the balanced fund, Mandatum Global seems to have a souther investor distribution than Sampo Sustainability Equity.

[17] One should note that the smallness of the postal code do not perfectly correlate with the location of the place in the south-north direction. Thus, the differences in the average postal codes should be interpreted with caution. However, the postal codes were the best possible indicator of the south-north location that was available for the analyze. If the differences are significant at least 0,01 level the author believes that they indicate also real differences in the south-north location.

Figure 6-22: The Postal code Domicile of the Ethical Investors vs. the Reference Investors – Total

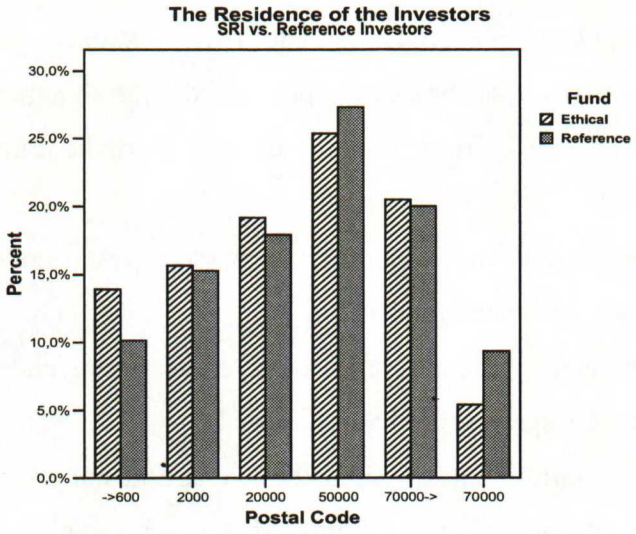
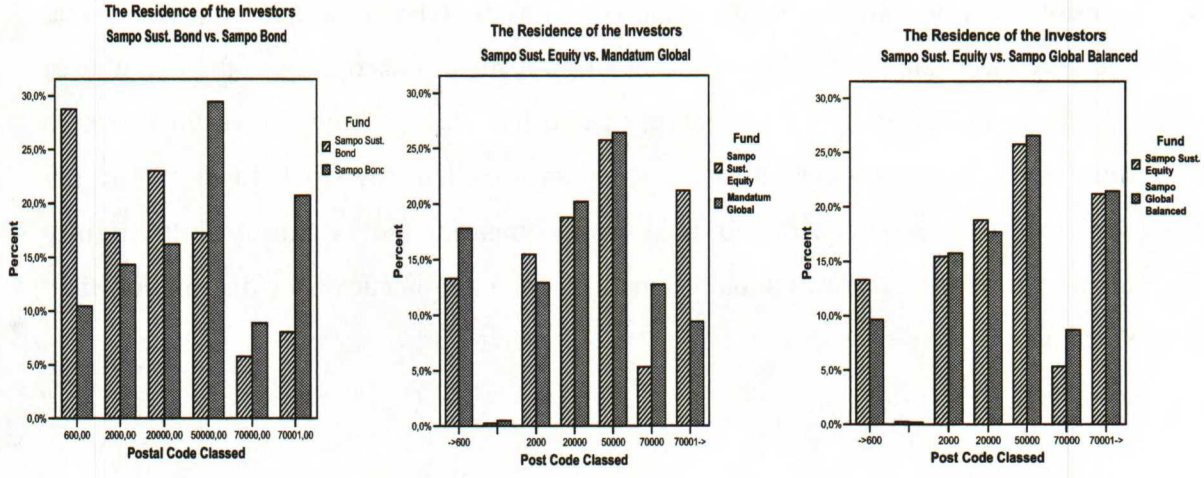


Figure 6-23: The Postal code Domicile of the Ethical Investors vs. the Reference Investors –Fund Level



To get the statistical verification to the postal code differences the data was analyzed by T-tests. The statistical results of the test are presented in Table 6-15. In total the ethical investors are proven to live souther than the reference investors with the confidential level of 0,001 and again main hypothesis 3A is accepted. The outcome is the same in the bond funds, where Sampo Sustainability Bond has smaller postal code average with 0,001 confidence.

The distribution difference in the bond funds is clearly the largest one –the domicile of the ethical fund investors has over 17000 lower average postal code than the reference fund investors. In stock funds Sampo Sustainability Equity has 2929 smaller average postal code than Sampo Global Balanced and the difference is approved in the 0,01 confidence level. However, Mandatum Global has 4181 smaller postal code average than the ethical fund. Thus, all the other sub-groups support Hypothesis 3B except the Mandatum Global case.

Table 6-15: The Statistical Significance of the Postal Code Differences

	SRI Total	Ref. Total	Sust. Equity	Sust. Bond	Sampo Bond	Mandatum Global	Sampo Glob. Balanced
Average Postal Code	30164	33281	30903	17127	34234	26722	33832

	Mean Diff.	p-value	t-stat.
SRI Total / Reference Total	-3116***	0,000	-3,382
Sampo Sust. Bond / Sampo Bond	-17107***	0,000	-5,962
Sampo Sust. Equity / Mandatum Global	4181	-	-
Sampo Sust. Equity / Sampo Glob. Balanced	-2929**	0,003	-2,989

* = Significance level 0,05 ** = Significance level 0,01 *** = Siginificance level 0,001

Urbanization

The assumption in the hypotheses 3B was that the socially responsible investors are more urbanized than the reference group. To study the hypothesis the residence area of the investors is described by two different indicators of the urbanization level. The first indicator is the division of investors' domicile to urban, dense and rural areas. The second indicator is the division of investors' domicile to cities over and under 100 000 inhabitants. The difference of these two indicators is that while the first one classifies the majority of the population to the urban area leaving only a small minority to the rural classification, the second indicator aims to detach the 'urban minority' leaving the majority under non-urban classification.

The working hypotheses studied are the following:

3B): "In the socially responsible mutual funds the percentage of urban investors is higher than in the reference funds."

3B-b): "In Sampo Sustainability Bond –fund the percentage of urban investors is higher than in the reference fund Sampo Bond."
3B-c): " In Sampo Sustainability Equity –fund the percentage of urban investors is higher than in the reference funds Mandatum Global and Sampo Global Balanced."

To get the idea if the working hypotheses can be accepted or not Figure 6-24 represents the distribution of the residence between urban, dense and rural areas and Figure 6-25 between cities over and under 100,000 inhabitants. It can be seen from Figure 6-24 that the socially responsible investors have a slight lead in the urban group of investors, 79,2% versus 78,4% while in the rural investors group the percentage of reference investors in larger. The situation is alike in the Figure 6-25 , where 49,1% of the ethical investors live in cities over 100,000 inhabitants while the corresponding figure among the reference group is 45,9%. Thus, the main hypothesis 3B seems to get support.

In the fund level, as Figure 6-24 and Figure 6-25 shows, the situation is clearly according to the hypotheses 3B-b in the bond funds: Sampo Sustainability Bond has more urban investors than Sampo Bond. However, the situation is again mixed in the stock funds: Mandatum Global has more both urban investors and investors residencing in cities over 100,000 inhabitants than the ethical fund (ethical fund figures 78,3% and 47,9%, Mandatum Global figures 83,5%, 57,7%). The figures are contracting also in the balanced fund case: While the hypotheses seems to by a narrow margin hold when comparing the percentage living in cities over 100,000 inhabitants (ethical fund 47,9%, balanced fund 45,2%) the distribution of the residence is against the hypotheses in the urban, dense, rural –distribution where balanced fund has a higher percentage of urban investors than the ethical fund.

Figure 6-24: The Urbanization of Ethical vs. the Reference Investors: Urban, Dense and Rural Areas

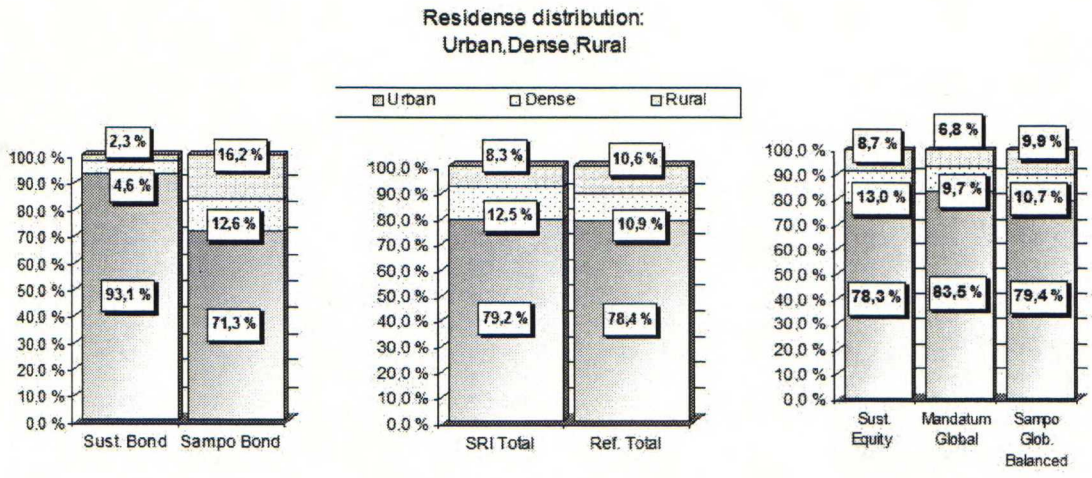
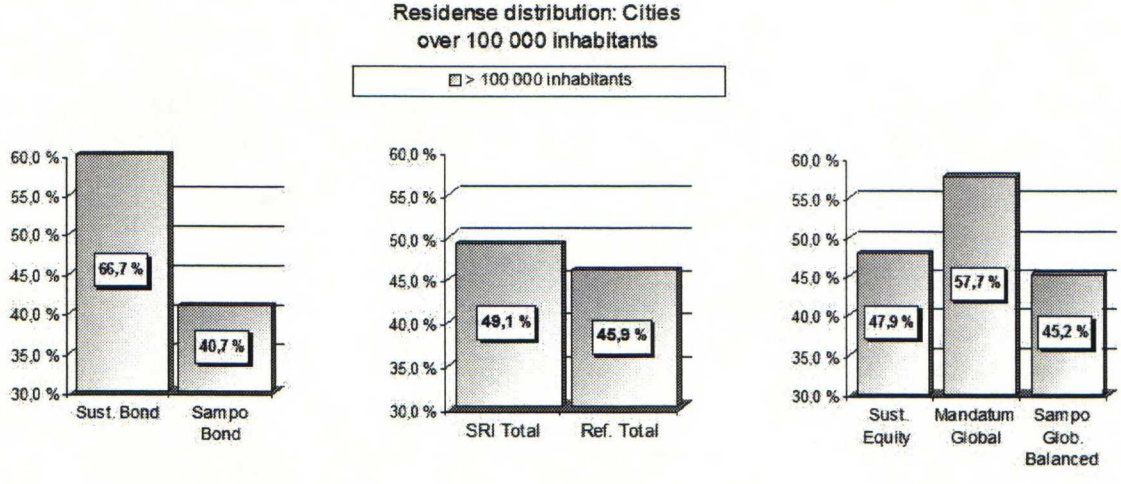


Figure 6-25: The Urbanization of Ethical vs. the Reference Investors: % of Investors Living in Cities over 100,000 Inhabitants



To find out the statistical significance of the outcomes the residence data is analyzed with χ^2-tests. The outcomes of the urban-dense-rural -distribution are presented in Table 6-16 and cities over 100,000 inhabitants in Table 6-17. The In total the ethical investors are proven to have a higher percentage of urban investors and the main hypothesis 3B can be accepted. The significance levels of the outcomes are 0,01 in 'the urban-dense-rural' –distribution (χ^2

(2) = 9,213 p = 0,009) and 0,05 in 'the cities over and under 100,00 inhabitants' -distribution (χ^2 (1) = 4,824, p = 0,028). In the big cities -distribution the ethical investors have 3,1 percentage points more investors in the big cities than the reference group.

In the bond funds the difference in the big city -distribution is very large: the ethical fund has 66,7% of investors living in cities over 100,000 inhabitants while the reference fund has only 40,8%. The 25.9 percentage points difference is accepted with 0.001 significance level (χ^2 (1) = 23,22, p = 0,000) as is also the outcome of the urban-dense-rural –distribution (χ^2 (2) = 20,19 p = 0,000). In the stock fund subgroup the hypothesis 2c don't get support since Mandatum Global has both higher percentage of urban investors and investors residencing in biggest cities. Also the balanced fund has a higher percentage of urban investors than the ethical fund. However, the situation changes when focusing on the biggest cities: there the ethical fund has 2.6 percentage points higher share of investors than the balanced reference fund. However, this difference is not statistically significant.

Table 6-16: The Statistical Significance of the Urban vs. Rural area Differences

	SRI Total	Ref. Total	Sust. Equity	Sust. Bond	Sampo Bond	Mandatum Global	Sampo Glob. Balanced
% of Investors in the urban area	79,2 %	78,4 %	78,3 %	93,1 %	71,3 %	83,5 %	79,4 %
% of Investors in the dense area	12,5 %	10,9 %	13,0 %	4,6 %	12,6 %	9,7 %	10,7 %
% of Investors in the rural area	8,3 %	10,6 %	8,7 %	2,3 %	16,2 %	6,8 %	9,9 %

	Hypothesis:	p-value	χ^2 - stats.
SRI Total / Reference Total	%	0.009**	9,213
Sampo Sust. Bond / Sampo Bond	%	0.000***	20,193
Sampo Sust. Equity / Mandatum Global	v	-	-
Sampo Sust. Equity / Sampo Glob. Balanced	v	-	-

* = Significance level 0,05 ** = Significance level 0,01 *** = Siginificance level 0,001

Table 6-17: The Statistical Significance of the Differences in the Residence of Cities over 100,000 Inhabitants

	SRI Total	Ref. Total	Sust. Equity	Sust. Bond	Sampo Bond	Mandatum Global	Sampo Glob. Balanced
% of investors in cities over 100 000 inhab.	49,1 %	45,9 %	47,9 %	66,7 %	40,8 %	57,7 %	45,2 %

	Mean Diff.	p-value	$\chi 2$ - stats.
SRI Total / Reference Total	3.1% *	0,028	4,824
Sampo Sust. Bond / Sampo Bond	25.9% ***	0,000	23,217
Sampo Sust. Equity / Mandatum Global	-9.9%	-	-
Sampo Sust. Equity / Sampo Glob. Balanced	2.6%	0,076	3,152

* = Significance level 0,05 ** = Significance level 0,01 *** = Siginificance level 0,001

6.4.1.4 The Amount Invested

The assumption in the hypotheses 4 was that investors should invest smaller amounts into ethical funds than into the reference funds. The working hypotheses studied are the following:

4): "In the socially responsible mutual funds the average amount invested is lower than in the reference funds."
4b): "In Sampo Sustainability Bond –fund the average amount invested is lower than in the reference fund Sampo Bond."
4c): " In Sampo Sustainability Equity –fund the average amount invested is lower than in the reference funds Mandatum Global and Sampo Global Balanced."

To get the idea if the working hypotheses can be accepted or not Figure 6-26 represents the distribution compared in the main hypotheses 4 and Figure 6-27 the distributions compared in hypotheses 4b and 4c. Figure 6-26 shows that ethical investors dominate the smallest amount classes and the reference investors the largest ones. Thus, the distribution seems to support hypothesis 4. In the fund level, as Figure 6-27 shows, the situation is clearly according to the hypothesis 4b in the bond funds: the ethical fund has distinguishly smaller

invested amounts than the reference. In the stock funds the distributions do not give a clear view to one direction or another: especially in the Mandatum Global case it is hard to say from the figure if the distribution is for or against the hypothesis since Mandatum fund dominates both the smallest and largest amount classes while the ethical stock fund dominates the middle classes.

Figure 6-26: The Invested Amount of the Ethical Investors vs. the Reference Investors – Total

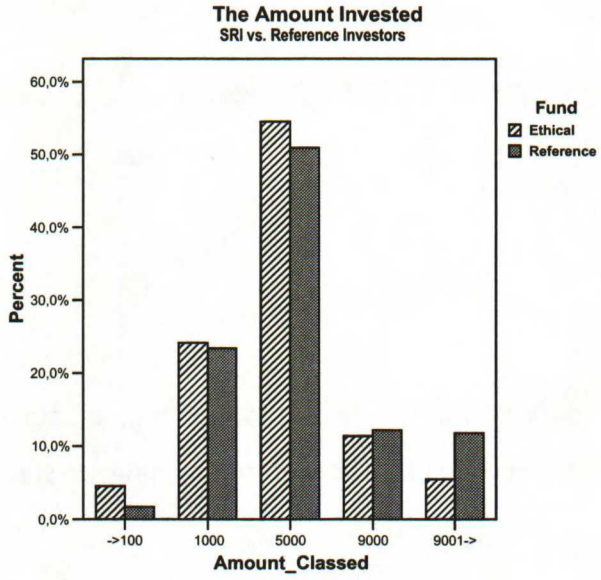
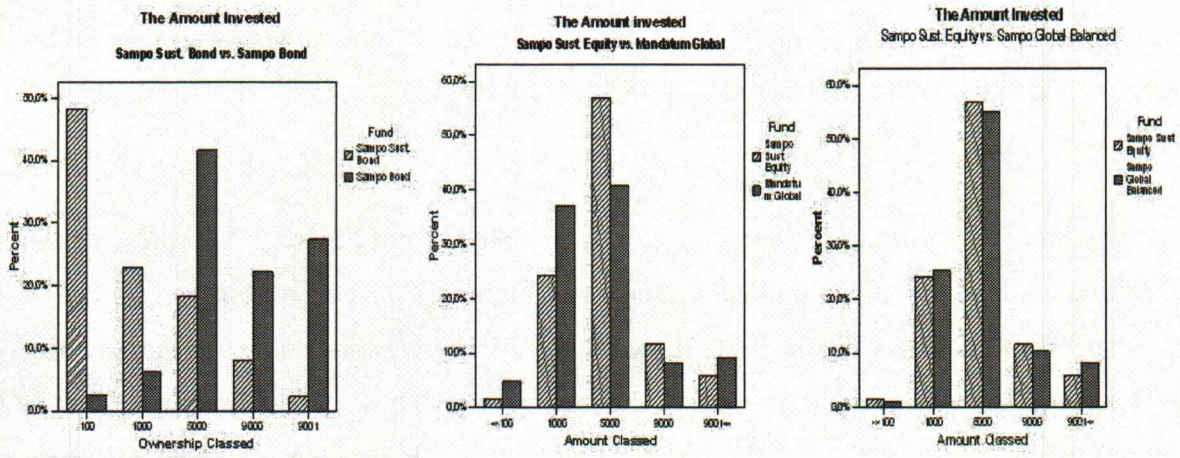


Figure 6-27: The Invested Amount of the Ethical Investors vs. the Reference Investors –Fund Level



The invested amount data was analyzed with T-tests. The statistical results of the test are presented in Table 6-18. The ethical investors are proven to have invested on average 1577 € less than the reference group (t (2450) = -11,75 , p = 0,000). The outcome is the same in the bond funds, where the ethical fund investors have invested on average 6956 € less than the reference group (t (144) = -14,04 , p = 0,000). In stock funds the ethical fund has also proven to have smaller invested amounts than the reference funds. The difference against Mandatum Global is 874 € (t(2277) = -3,04 , p = 0,002) and against Sampo Global Balanced 544 € (t(1931) = -4,09 , p = 0,001). The reason for the outcome in the Mandatum Global case is the high positive skewness (10,34) of Mandatum's distribution: it indicates the long right tail of the distribution and thus high ownership values resulting in higher average. To conclude, Hypothesis 4 and also the sub-hypotheses 4b and 4c are accepted.

Table 6-18: The Statistical Significance of the Invested Amount Differences

	SRI Total	Ref. Total	Sust. Equity	Sust. Bond	Sampo Bond	Mandatum Global	Sampo Glob. Balanced
Average Amount Invested	2 904,45 €	4 481,51 €	3 020,27 €	1524,83 €	8480,81 €	3 894,14 €	3 564,45 €

	Mean Diff.	p-value	t-stat.
SRI Total / Reference Total	-1577***	0,000	-11,745
Sampo Sust. Bond / Sampo Bond	-6956***	0,000	-14,035
Sampo Sust. Equity / Mandatum Global	-874**	0,002	-3,039
Sampo Sust. Equity / Sampo Glob. Balanced	-544***	0,001	-4,085

* = Significance level 0,05 ** = Significance level 0,01 *** = Siginificance level 0,001

7 CONCLUSIONS

Socially responsible investment has emerged in recent decades as a fashionable and increasingly popular topic in the financial services industry, particularly in the United States. There are number of possible reasons for this growth both in the supply and demand side of financial markets. In the demand side the factors are related to personal preferences of both individuals and institutional investors and enhanced by common request for corporate social responsibility. Moreover, at the moment the social and political climate is clearly in favor of

socially responsible investing. Especially in Europe the new legislation and directives in the area of pension funds promote the growth of socially responsible investing.

Even though the socially responsible investment industry has experienced a remarkable growth during the past 15 years, the market still presents only a marginal part of the total mutual fund market. According to statistics, the field is most popular in US accounting for approximately 2% of the total mutual fund assets. In Europe the corresponding figure is 0,36%, but there is prominent variation between different European countries. For example, in UK, the Netherlands and Sweden the socially responsible funds account for more than 1% of the mutual fund assets.

Compared to these European leaders in the socially responsible fund markets, Finland is still in its infancy. At the end of 2004 there were 14 investment funds listed in HEX that can be classified as socially responsible and of these funds only 6 were registered in Finland. The assets of socially responsible funds domiciled in Finland accounted only for 0,37% of the total Finnish fund assets (€ 31 075,3 million), which is close to the European average 0,36%.

Ethical investment or socially responsible investment (briefly SRI) is broadly defined as the integration of personal values, social concerns and economic factors into the investment decision. Even though the era of socially responsible investing in Finland is quite short, it has been studied quite extensively. Many studies have examined the investment alternatives in the field of Finnish socially responsible mutual funds, and also studies about the financial performance of ethical mutual funds have been made. However, there are no studies made about the characteristics of the investors investing in socially responsible investment alternatives in Finland. Thus, the aim of this study was to find out who are the persons who invest in socially responsible investment targets in Finland. Moreover, the objective was to discover possible differences between the ethical and conventional investors. The international peer studies of Tippet and Leung (2001), Lewis (2001) and Rosen et al. (1991) support the hypothesis that such differences may exist also in Finland.

Since it is hard to define which investment targets are ethical and which not the investor data was collected among mutual fund investors. Because the name and the investment policy of

the mutual fund give a clear indication if the fund is targeted to investors who want to participate socially responsible investing the division between socially responsible and conventional investors is most easily done through mutual funds. The data consisted of two socially responsible mutual funds – a fixed income fund and a stock fund - and three reference mutual funds. All the funds in this study are mutual funds of Sampo Bank. The reason for choosing Sampo Bank funds is the centrality of its assets at the Finnish mutual fund market: In addition being one of the biggest mutual fund providers in Finland, Sampo has also been active in the socially responsible mutual funds.

The two selected socially responsible mutual funds were Sampo Sustainability Bond (Sampo Kestävä Arvo Korko) and Sampo Sustainability Equity (Sampo Kestävä Arvo Osake). The first one invests only in the fixed income securities while the latter invests in the stock markets. Sampo Sustainability Bond had one reference fund, Sampo Bond. Sampo Sustainability Equity had two reference funds – one pure stock fund (Mandatum Global) and one balanced fund (Sampo Global Balanced). The reason is that Sampo Sustainability Equity has before been a balanced fund and thus its ownership structure may still have indications from that time. To get the references as valid as possible, also a balanced fund was chosen. The data consisted of the ownership structure of the funds at 30th September 2004.

The study focused on demographical characters that could be analyzed by utilizing the investor database of Sampo Fund Management Ltd. The age, gender, place of residence and the amount invested of each ethical and conventional domestic private investor was studied. The data consisted in total of 1 372 ethical and 13 150 conventional investors. To get the main results the investors of the two ethical funds were collected together to combine 'the average ethical investor' and the same procedure was conducted in the reference investor group. In addition, the tests were conducted in two sub-groups – in bond funds and stock funds.

The summary of the hypotheses and their outcomes is presented in Table 7-1. The Hypothesis 1 suggested that the ethical investors should be in average younger than the conventional investors. The ethical investors turned out to be on average 1,66 years younger than the reference group and the hypothesis was accepted with 0,01 confidence level. The outcome is in line with the findings of Rosen et al. (1991) UK study and Tippet and Leung's

(2001) Australian study, even though the differences they found are much higher than 1,66 years. The age difference of Rosen's study was by far larger: the average age of the SRIs was 39 years and the reference group 52 years. Tippet and Leung did not calculate average ages; instead they divided the investors into different age classes and compared the proportional distributions of each age class. In any case, they found the ethical investors to be much younger than the conventional investors. Of the sub-groups of this study the other supports the hypothesis 1 and the other don't. The age difference in the bond funds is high, 14,79 years and hypothesis 1 is accepted with 0,001 confidence level. In the equity funds Mandatum Global has already in the starting point 7,44 years younger investors and the hypothesis don't get support from this fund pair. In the test of the fund pair Sampo Sustainability Equity and Sampo Global Balanced the SRIs are perceived to be 1,44 years younger with 0,05 confidence level.

Table 7-1: Summary of the Statistical Test Outcomes

	Hypot. 1 Age	Hypot. 2 Gender	Hypot. 3A Residence	Hypot. 3B Residence	Hypot. 4 Amount
SRI vs. Reference Total	%**	%***	%***	%*	%***
Bond Funds:					
Sustainab. Bond vs. Sampo Bond	%***	√	%***	%***	%***
Equity Funds:					
Sustainab. Equity vs. Mandatum Global	√	%***	√	√	%**
Sustainab. Equity vs. Sampo Global Balanced	%*	%**	%**	%	%***

* = Significance level 0,05 ** = Significance level 0,01 *** = Siginificance level 0,001

Hypothesis 2 stated that the percentage of females should higher in the SRIs' group than in the conventional investors' group. The ethical investors turned out to be on average 4,95 percentage points (SRIs 55,47% females while in the reference group 50,52% females) more likely to be females than the reference group and the hypothesis was accepted with 0,001 confidence level. The outcome is in line with the findings Tippet and Leung's (2001). Again, however, the difference they found was higher: The ethical investor group of their study had 39% males and 61% females while the corresponding figures of the investor group in total were 65% and 35%. The sub-group results of this study are again mixed. In the bond funds Sampo Bond has 2,16 percentage points more female investors than the ethical fund and thus the hypothesis do not get support from the bond fund group. Instead in the equity funds Sampo Sustainability Equity has 11,8 percentage points more female investors than

Mandatum Global and 4,45 percentage points more than Sampo Global Balanced. Thus, the hypothesis is supported in the equity funds group.

Hypothesis 3 presumed that firstly, the SRIs should live souther and secondly, should be more urbanized than the conventional investors. These hypotheses were not studied by the peer studies that the author was able to find, but they get support from the findings of socially responsible consumer studies and theories that have been used to explain socially responsible behavior. The south-north location of the residence was expressed by the postal code with the assumption that the smaller the postal code, the souther the location. In the urbanization tests the residence was divided to three groups – urban, dense and rural – and the proportional distributions in these groups were studied. In addition, the investors were divided into those who live in cities over and under 100 000 inhabitants. The ethical investors proved to live souther with 3116 units smaller average postal code and the hypotheses 3A was accepted with confidence level of 0,001. The urbanization tests gave also both support to the hypothesis 3B: In the urban –dense –rural –distribution the ethical investors had a more urban-dominated distribution compared to the reference group with the 0,01 confidence level. In the big cities –test the ethical investors turned out to have 3,1 percentage points more urban investors at the 0,05 significance level. In Table 7-1 the worse/less significant outcome of the two urbanization tests is presented in the Hypothesis 3B column.

Hypothesis 4 suggested that the ethical investors would have invested smaller amounts to the ethical fund than the conventional investors to the conventional fund. The hypothesis gets support both from the peer studies and from theories identifying the investment behavior of the ethical investor. The SRIs turned out to have invested on average 1577 less than their conventional counterpart and hypothesis 4 was accepted with 0,001 confidence level. The difference is large when taking into account the fact that the average ethical investment was 2904 € and the reference investment 4481 € - the average ethical investment was only 65% of the size of the conventional investment. The findings are in line with the findings of Tippet and Leung (2001). Because the data of their study consisted of equity investors, not mutual fund investors, the portfolio sizes are not straightly comparable but the direction is the same: of the SRIs two-thirds (66%) held ethical portfolios less than $50,000 while the corresponding figure of the investors in total was 31%.

Hypothesis 4 was the only hypothesis that got strong support from both of the sub-groups. The difference was especially clear in the group of bond funds: SRIs had on average invested 6,956 € less than the conventional investors and the hypothesis was accepted with 0,001 confidence level. The difference was accepted with 0,01 confidence level also in the group of equity funds but the differences between the average invested amounts were not in the same magnitude as in the group of bond funds.

To conclude the outcomes of the study, all the main hypotheses 1-4 were accepted. The results are thus in line with the international peer studies, even though the peer studies found much larger differences than this study. However, the newest peer study, the study of McLachlan and Gardner (2004), did not find proof to demographical differences between ethical and conventional investors at all. This fact suggests that either the differences found in the older peer studies are not applicable to the whole population or the differences are decreasing. After combining the results of this Finnish study to the existing ones, I would say that the differences still exist but are clearly smaller than in the times of the older peer studies.

To study the data in more depth the investors were divided into two sub-groups, fixed income and equity fund investors. All the hypotheses except the gender hypothesis seem to get strong support in the fixed income group. Instead in the equity fund group especially Mandatum Global possesses many characters that are against the hypotheses. The reason may lie behind the different history of the funds and the marketing of the funds: According to Manager Pekka Karppi from Sampo Fund Management Ltd., Sampo Bond has been marketed as "familiar and safe" investment option and thus may have attracted especially older customers. However, as the ethical funds had also a 'safe' investment alternative, Sampo Sustainability Bond, this should not have distorted the test results. Also the balanced fund, Sampo Global Balanced, has been very popular investment target among the mutual fund salespersons and it was actively offered "to everybody". Thus, it should represent the mutual fund investor population quite well. Mandatum Global instead was at the beginning only at the list of Mandatum's salespersons and thus in the history it was offered to a smaller group of investors. Moreover, nowadays when the Mandatum funds are offered to all customers together with Sampo funds, Mandatum funds can be seen perhaps as "slightly

riskier and sexier" alternatives thus appealing younger and urban investors. However, Karppi states that it is not clear that in total funds that operate under Mandatum brand would have younger investor structure than funds operating under Sampo brand.

What about the applicability of the findings to the general investor population? Since the sample was not a random sample from the investor population and consisted of the investors of only one bank, one can hardly say with no doubt that the results are fully applicable. However, since Sampo is one of the largest mutual fund providers to private customers in Finland and has also had a large market share in the ethical funds, the author sees that the results give a quite realistic picture of the situation. It would in any case be interesting to see if the findings from other samples are coherent with the findings of this study. Moreover, this study focused on the age, gender and residence of the investors plus the amounts invested. Thus the questions about the Finnish SRIs income and socio-economical status remain unanswered. In addition it would be interesting to find out what are the reasons why the Finnish SRIs have decided to invest ethically and what are the most important ethical criteria to them.

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